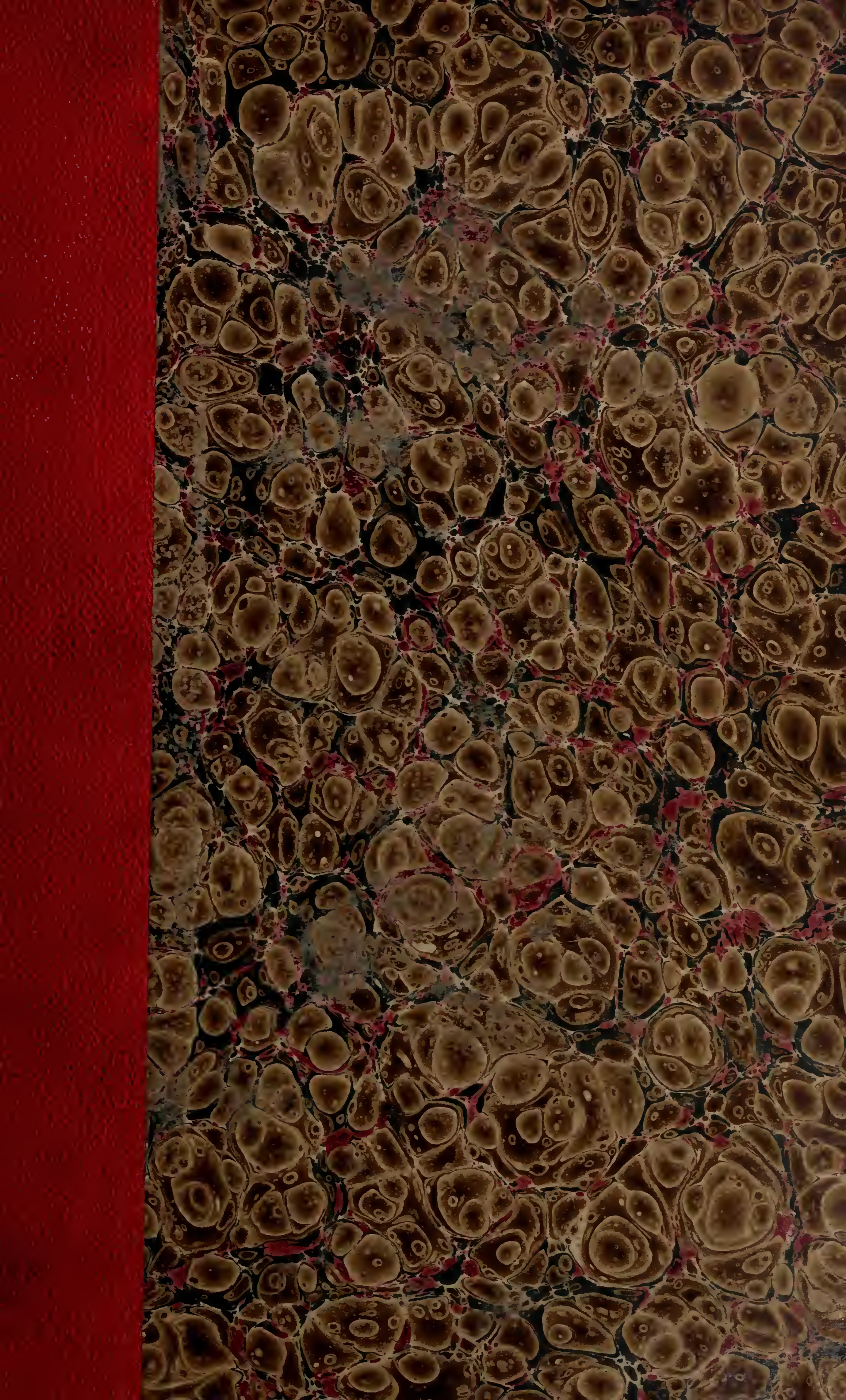

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ALBANY

MEDICAL ANNALS:

A JOURNAL

OF THE

Medical Society of the County of Albany.

VOL. VI.

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CLINICAL LECTURES, DELIVERED AT ST. PETER'S HOSPITAL AND THE ALBANY HOSPITAL, BY LAWSON TAIT, F.R.C.S., BIRMINGHAM, ENGLAND, WITH A REPORT OF THE RESULTS OF THE OPERATIONS.*

BY ALBERT VAN DER VEER, M.D., AND JAMES P. BOYD, M.D., ALBANY.

[FOR ALBANY MEDICAL ANNALS.]

AT ST. PETER'S HOSPITAL, SEPTEMBER 10, 1884.

Gentlemen—The patient before you is forty-five years of age and a resident of this city. There is no particular history to her case until 1882, when her periods began to cease. This condition troubled her greatly, and she suffered severe mental distress and worry, but no great bodily pain. Her periods finally returned, after which she had a great variety of symptoms, such as backache, lassitude, etc. Soon after the retnrn of the menses she noticed a small lump on the left side of the uterus. There was considerable irritation of the neck of the bladder, and the patient suffered from much pain, chiefly of a lancinating sort. The growth gradually increased in size, and the pains became constant. This state of affairs continued until she entered the hospital, in August, when the growth had become very large, and the patient was much reduced in strength. The abdomen now is, as you see, greatly distended. The patient also shows that the work of emaciation has been going on for a long time. Her arm, as you see it, is very much reduced, and the skin has that peculiar feeling which is invariably found in those patients who have become reduced as this woman has. By carefully noticing the peculiar "feel" of the skin, you will become able in time to tell with great exactness how far emaciation has proceeded. And let me here advise you to proceed gently with your examinations. Gentleness and caution are the prime requisites in handling any patient, and will teach you indirectly many things about a patient which you could not learn if she were handled roughly or became frightened.

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* Partly from stenographer's notes taken by Student W. H. Whish.

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Careful examination of this woman leads me to believe that she has a large ovarian tumor surrounded by masses of papillomatous growths. There is no chance for an operation here. The growth has advanced so far and the conditions are such that the patient could not survive the operation. The only resource in such cases is to tap the patient. In doing this I never use a trocar, but find it much better to make a small incision and establish a peritoneal fistula. In this way you make the patient's condition much more easy than by general tapping. It sometimes happens, too, that the formation of a peritoneal fistula results in a cure of the disease.

In one of my cases, a young woman with a condition of ascites, I found, on opening the abdomen, both layers of the peritoneum covered with papillomata. I established a peritoneal fistula,which was kept open for three months, and resulted in a complete cure. Such cases are sometimes curable and sometimes not, but with each tapping the patient is sure to grow weaker, whereas the formation of a fistula offers better results.

The next case is one that calls for an operation for the relief of the patient. And here let me say to you that abdominal operations are now perfectly defensible. Better knowledge and skill have reduced the mortality so that it is now no greater than in other major operations. As to the right or wrong of unsexing a woman, by removing the organs as we are about to do to-day, that is a question about which there is some superstition, but the result of the operation is almost always favorable, and, after all, it is not so easily seen why this region should have a greater morality than any other.

This patient is thirty-one years of age, unmarried, and enjoyed good health until she reached her seventeenth year, when she was sent to Bellevue Hospital, New York, on account of an attack of pneumonia. She remained in the hospital three months. After leaving the hospital, the menstruation was irregular and profuse. She was able to do housework, and did not seek medical advice until about eight years afterwards, when she again was admitted to Bellevue Hospital. At this time frequent hemorrhages from the vagina had prostrated her. In the winter of 1881 the patient was in the Albany Hospital, and the principal symptoms at the time of admission were severe abdominal pain and hemorrhage.

Examination shows that she has a large bi-lobed tumor, the parts of which are of unequal size. The larger mass is a cystic ovary and the smaller mass on the left a myoma of the uterus—may be two large soft myomata.

I have no hesitation in operating upon this case, although I have some doubts as to the propriety of conducting such operations in a crowded room. I have never before operated in the presence of more than a dozen persons, and, should this patient do poorly, I should be inclined to lay it to the atmosphere in which the operation was performed. Mr. Tait here began the operation at 4:42 P. M., assisted by Drs. Van der Veer and Boyd. After opening the abdominal cavity, he announces that the case was one of solid ovarian tumor and of uterine myoma, and proceeded to remove both, with the entire uterus. The operation was finished at 5:24 P. M., making the time from the first incision to the conclusion of stitching up the wound precisely forty-two minutes. The pedicle was treated by Tait's circular wire clamp. The wound was dressed with simple pads made of absorbent cotton covered with carbolized gauze. Two of these were placed over the wound and held in place by a cotton bandage passed around the patient's waist.

After the operation the patient's condition was favorable until about 10 P. M., when there was a severe hemorrhage from the vagina, apparently. About this time a catheter was introduced, and the urine drawn from the bladder was found mixed with blood. Through the prompt and efficient measures adoptod by the house physicians, Drs. Flynn and Melick, the patient rallied, although when they began the use of the hypodermic injections the patient's pulse was imperceptible, and the respirations about 42. At 4:30 A. M., September 11, 1884, the patient desired to empty the bladder; a catheter was introduced, but no urine was found.

At 10 A. M., September 11, 1884, the patient was seen by Mr. Tait and Dr. Boyd. After reading the house physicians' report Mr. Tait concluded that a portion of the bladder had been constricted by the clamp. A careful examination of the pedicle and abdominal wound revealed a satisfactory condition of affairs. Examination of the vulva revealed the fact that blood was slowly flowing from the urethra, and a catheter passed into the bladder came in contact with clots. Mr. Tait remarked that the patient's recovery would be retarded by the accident, as a fistula of the bladder would result, but that even with this complication she would recover. He said that the accident had occurred in two of his operations in England. The bladder was washed out twice a day with a weak solution of carbolic acid and a soft catheter allowed to remain in the urethra. After a few days a solution of boracic acid was substituted for the carbolic acid.

On the fourth day after the operation a bloody fluid was noticed oozing near the pedicle of a decided ammoniacal odor. There was no evidence of tympanites at any time. The stitches were removed on the sixth and seventh days after the operation, and the wound was found to be perfectly healed as far as the clamp. The only dressing used was that of absorbent cotton and carbolized gauze. The clamp was removed on the eleventh day. Long before this time the urine flowed freely through the opening in the abdominal wall. As the remants of the pedicle were removed a large funnel-shaped cavity came into view, at the bottom of which was the fistula. The temperature reached 102° F. on the day after the operation; also on the third, fourth and fifth days. On the fourteenth day 103° F. was reached; this was the highest temperature recorded. The pulse was above 100 for the seven days succeeding the operation.

On the 30th of November, 1884, the fistula was entirely healed, and the patient had perfect control of the bladder. Examination of the abdomen revealed a firm cicatrix extending from near the umbilicus to the symphysis pubis, and no trace of the fistula could be discovered.

AT ALBANY HOSPITAL, SEPTEMBER 11, 1884.

Gentlemen—This morning I have the pleasure of addressing you farther on the interesting subject of uterine tumors and of showing you several cases.

The patient now before you is a young woman thirty-seven years of age, who gives the history of gradual enlargement of the abdomen for the past two years. Here let me caution you to use the greatest care in your diagnosis of a suspected tumor in an unmarried woman. In England we have learned that women when in trouble will lie persistently to conceal their shame, and we never depend on any evidence but that of our own senses when we suspect pregnancy. The first question you are to ask a single woman who presents herself for examination is, "When were you unwell last?" and on her answer you base your conclusions in a measure. In the present case we have no cause for fear. The appearance of the tumor is very marked, and shows that it is made up of cysts, and there is no doubt of the patient's condition. Let me here advise you to acquire as soon as possible the *tactus eruditus* which is so useful in making these examinations. Practice with your hand upon a water cushion until you get accustomed to the wave fluctuation. By examining this patient by palpation I am able to determine an ovarian tumor filled with water. As the patient moves I am able to distinguish crepitus by placing my hand lightly upon the tumor. This crepitus does not necessarily indicate adhesion, because membranes cannot move upon each other if adherent, and no sound would be produced. In the lungs, as you know, crepitus is a sign of inflammation.

The second case which is now presented to you is of interest because the woman belongs to a race which is subject to uterine myoma. Pelvic tumors are of very frequent occurrence in negro women, but why this should be the case I am not able to say. We have no knowledge of the cause of growth of tumors, but that such diseases are the result of civilization is beyond a doubt. Ovarian tumors were not known until the middle of the seventeenth century, when their appearance is noted by the writers of the day. In England the ovarian cystoma has increased many times in frequency in my own time. This increase cannot be explained by our increased facilities of diagnosis, and the cause must be attributed to something in our mode of living, perhaps in our sexual life.

This patient is fifty-seven years of age, and has suffered from excessive menstrual hemorrhage for twelve years. Her lips, though tinted with the pigment of the skin, show evidences of advanced anæmia. The terrible drain upon the system by the repeated abnormal flow is well marked. This case shows plainly that the belief that the climacteric will remove or cure the trouble is entirely erroneous.

An attempt has been made to relieve this woman by dilating the cervix and enucleating the tumor, but it has failed, and in general I do not advise enucleation in cases of myoma. It has failed three out of five times in my own experience, and the removal of the uterine appendages is, after all, the only way in which a complete and satisfactory cure can be effected. Surgical interference is always justifiable when the condition of the patient requires it, and there is little danger from an operation when the tumor is small.

This patient has been treated by every possible means but the knife, and without relief. And you will find in the great majority of cases an operation offers the most satisfactory and complete cure. The primary mortality is so small and the secondary success so remarkable that, as a rule, you should operate as soon as ergot and bromide fail to relieve and while your patient has a fair chance for recovery.

The next case to be presented is by far the most interesting for many reasons. The patient is thirty-three years of age, and has been subject to fits for upwards of nineteen years. Up to the time of puberty she was a healthy girl, but during the past twelve years her general health has been very bad. The fits in this case are clearly hysterical in character, and not epileptic. The patient has never injured herself in any way during an attack, and an epileptic usually does. Neither does she become drowsy after an attack, as is inevitably the case in epilepsy. The history shows that the fits always come on before a menstrual period, and that the periods are fairly regular, the flow being rather under than over the usual quantity. The chief symptom in the case is the intense pain which the patient experiences previous to the period, and which is relieved when the flow is established. Pelvic examination shows that the uterus is infantile and anteflexed, as is usual in such cases. The left ovary cannot be felt, while the right is enlarged and probably cystic. The case is without doubt one such as is frequently met in England, where the patient's life from the beginning to the end of menstruation is one long agony. This woman consents readily to an operation when its nature has been explained to her, and nothing should prevent a surgeon from giving relief by the knife in such a case. In her present condition she is fully as sterile as she will be when the ovaries are removed, so that this objection can have no force.

The patient was then etherized and the operation begun. An incision two and one-half inches in length was made in the abdomen, just above the symphysis, in the median line, and the ovaries removed. The right ovary was found to have undergone cystic degeneration, while the left was small and shriveled. To the left ovary Mr. Tait attributed the patient's trouble. The fallopian tubes were not diseased. The operation closed with the dressing of the incision at 11:55 A. M., having occupied about ten minutes.

After the operation patient's condition continued favorable until the end of the second day, when the abdomen was so greatly distended as to cause annoyance. Enemata were ordered, and in course of a few hours the bowels moved freely, and great relief was experienced. On the sixth day all the stitches but one were removed, and as it was pulled out a small quantity of pus followed. A large abscess was found in the line of the incision, and retarded the patient's recovery considerably. The abscess was treated with the "red wash," recommended by Mr. Tait, and zinc ointment. The temperature was 101° on the fifth day; on the other days during the first week it varied from 99° to 100. The pulse was variable. At the end of a month the patient was able to walk around, and the wound soon after was completely healed. During the time that the patient was confined to the bed there were no attacks which could be compared with those of epilepsy. The patient was very hysterical; otherwise nothing unusual was noticed about her. About six weeks after the operation the house physician reported to me that she had a convulsion, followed by complete loss of consciousness. This was the only one that occurred during her stay in the hospital.

LAWSON TAIT, in the *British Medical Journal*, gives his method for the radical cure of umbilical hernia by abdominal section, and considers it applicable to other forms of hernia. He opens the sac, frees all adhesions, cuts off omentum that may be in the way, pares the edges of the ring, and stitches up the wound with a continuous silk thread, which he leaves permanently. The results have been most satisfactory.—*Can. Lancet.*

THE VECTIS, AND MACROTIN.

BY W. E. ROGERS, M.D., REXFORD FLATS, N. Y.

[FOR ALBANY MEDICAL ANNALS.]

Believing, as I do, that any thing that promises to shorten the pains of labor and the dreary imprisonment of the doctor deserves attention, I will offer a few suggestions, which have been repeatedly proved to be valuable in my own experience.

The Vectis, and Macrotin, in my hands, have proved powerful auxiliaries in shortening the hours of labor. I was instructed in the medical school never to take an instrument with me to the bedside of the patient. I have long since learned never to go there without one.

The vectis is my favorite instrument, and I seldom find it necessary to resort to the forceps. Many times when the pains were good, but when the head, though properly presenting, was not in just the position to glide along the oblique diameter of the pelvis easily, and the labor was thus retarded, I have, by slipping the vectis under that side of the head which was unduly pressing against the pelvis, lifted it into its proper place, and then, with a little traction, brought about the delivery speedily.

I have often been surprised at the rapid advancement of the labor when the pains are aided by the vectis. When the pains are inefficient and the os undilated and unyielding, I put five or six grains of *Macrotin* in half a teacupful of water, and give, every fifteen minutes, one or two teaspoonfuls. One of the first effects observed is a relaxation of the os and soft parts and an increased flow of mucous. The pains now soon improve, you slip in the little vectis, and when the uterus pushes, you pull, and in an incredibly short time the labor is accomplished *cito, tuto et jucunde.*

I have seldom had any trouble with the after-birth when I use the macrotin, and in thirty-seven years' practice have never lost a patient, but have received much gratitude from my patients for their speedy deliverance.

Cocaine applied to the os uteri has controlled pain of dysmenorrhœa. Only five parts of the chloride are soluble in water.—*N. E. Med. Monthly.*

COCAINE TRITURATION.

BY T. F. C. VAN ALLEN, M.D., ALBANY.
Albany Medical College, 1882.

[FOR ALBANY MEDICAL ANNALS.]

A few days after cocaine appeared in New York city as an anæsthetic, I, among some others, suggested its use in the form of a trituration. Until about two weeks ago I did not put the idea into practice. I have noticed nothing in our journals upon the subject, so a short statement of my limited experience may be of interest. Dr. Huested; of this city, prepared me a trituration of Merck's hydrochlorate of cocaine, with pulverized gum acacia, four per cent. in strength. I have so far only used it in six cases, and cannot speak very decisively as to its value.

There is a class of patients who delight in tightly closing the lids after you have dropped in any solution, thus squeezing a great portion of it out, or else they deliberately wipe it out in spite of your cautions. For these a trituration is more satisfactory. Under any circumstances more or less of a solution is lost by its running over the lid and being washed away by the tears.

A four-per-cent. trituration of cocaine is not irritating, and, when properly dusted in the eye, is not squeezed out nor readily washed away by the secretions. A much smaller quantity has the same effect as a larger quantity of a solution, and its action is maintained for a longer time.

But the other side of the question. While a trituration is more economical, it is not so neat as a solution; it is simpler to drop in a drop than to dust in a powder; it requires considerably longer for a trituration to act; it cannot be readily introduced into the incision as a progressive step in a cutting operation; and in operations upon the nasal duct it does not readily find its way down the duct and anæsthetise its mucous lining.

The first cases in which I used it were those of foreign bodies upon the cornea. It was perfectly satisfactory, except that it required about sixteen minutes to act, instead of eight or ten, as with a good solution.

The third case was one of phlyctenular keratitis, in which it seemed preferable to the solution, which had been previously tried.

The fourth—an operation—tenotomy of the right internal rectus. The trituration was dusted in but once. After waiting twenty minutes, the operation was completed with as little pain as if a solution had been used, and dropped into the incision as well.

The fifth, an operation for stricture of the nasal duct. The effect upon the canaliculus was perfect, but there was little or no anæsthesia of the duct itself.

The sixth case, an operation for transplanting a pterygium. The operation was, for certain reasons, a rather lengthy one, and, from my experience with a solution, I am confident it would have to have been instilled twice, at least. The whole operation was accomplished without pain, and in this case I am positive the trituration was preferable.

The reason for the more sustained anæsthesia is that the powdered acacia forms, with the secretions, a rather tenacious mucilage, which is not readily washed away by the tears, and thus sustained anæsthesia is due to sustained action.

Is a trituration any better than a solution? I cannot answer from such limited experiment. Still, I might venture to say that for ordinary use, *no*. For lengthty operations on the surface of the eye, *yes*.

There can be no doubt as to a trituration keeping better than a solution, and it is more suitable for the pocket case.

January 7, 1885.

ABSTRACTA.

Mr. Lawson Tait delivered his first clinical lecture, in September, to an Albany audience. It is said he did very well for a beginner.—*Canadian Practitioner.*

Mr. Lawson Tait, F.R.C.S., in the course of a lecture entitled "American Notes," read before the Birmingham (Eng.) Medical Society, October 31, 1884, said of his visit to Albany:

"Of the cities of the States the first I visited was Albany, the capital of the state of New York, a city famous as being the seat of some of the earliest Dutch settlements. In Albany I found two large hospitals—one of Catholic foundation and the other a public institution—somewhat under state control. I was the guest of Dr. Van der Veer, who is attached to both of the institutions, and he was kind enough to give me opportunities of meeting the staff of both of them and what must be considered by far the greatest number of the profession of the city and its neighborhood. Here, as in Canada, I was very favorably impressed with the style of the men I met, and here again was pained by the fact I have already alluded to, and evident on all sides, that my profession in the States has a social position and influence far greater than it enjoys here.

"There is in Albany a very large and successful medical school, with about 250 students. There is an abundance of clinical material. The students are a very earnest and well-conducted body of young men, and their professors uniformly give them a character for steadiness and decorum which perhaps might excite the envy of some similar bodies here. I had an opportunity of delivering two clinical lectures at their school, and I was asked by Drs. Van der Veer and Boyd to perform operations in each of the hospitals, both of which tasks I undertook with very considerable hesitation.

"In the first place, as I appeared before my medical brethren as a representative of British surgery, and as I never in my life had an opportunity of delivering such a thing as a clinical lecture, I very much feared my performance would prove extremely unsatisfactory, for the delivery of clinical lectures, like every thing else, can only be well done by those accustomed to it. Our arrangements in England in this particular certainly do seem to be defective, for I could hardly get my American hosts to believe it possible that any one who has at his command such a mass of material as passes through my hands should never have had one single opportunity of making that material the means of instruction. The operations I undertook with still greater hesitation, for I had so often and so strongly objected to the performance of abdominal operations in large general hospitals that I could not undertake their performance without laying myself open to grave charges of inconsistency on the one hand, or on the other of subjecting my patients to an unjustifiable amount of risk. It was pointed out to me, however, that I had been invited to America as a sort of missionary, and that in so far as the work I did, and its results, had been the subject of misrepresentations and misstatements, it was my duty to emphasize my missionary statements by actual performances, and that this could be done most completely before large audiences of practitioners and students. Further, they argued that the mere performance on this ground of such an operation, under the circumstances to which I objected, would counterbalance and even justify the increased risk to which I believed the patients would be subjected. Upon this specious reasoning I was persuaded to perform a number of operations, with the result that all of them recovered. I am, therefore, somewhat shaken in my belief that the risks are as great as I had asserted them to be, but, on the other hand, as they were all done without the slightest antiseptic precaution, I am more than ever persuaded that ill-results are to be accredited rather to bad surgery than to malevolent germs. One of the cases at Albany was singularly satisfactory, as it included an accurate diagnosis of a solid ovarian tumor and of uterine myoma, and ended in the removal of both." —*Medical News*, Dec. 13.

President Barnard's Attack on the Great Pyramid Metrology.—Extracts from comments by C. Piazzi Smyth, F.R.A.S., F.R.S.E., etc., Astronomer Royal for Scotland, and author of "Our Inheritance in the Great Pyramid," "Life and Work at the Great Pyramid," and "New Measures of the Great Pyramid Tested": President Barnard's discourse on the Great Pyramid Metrology, in the Columbia College's *School af Mines' Quarterly Journal*, appeared in January, March and May, 1884. Deeply disappointing was it to me to find the Reverend President taking up the scoffing sneer of a vulgar and I fear infidel author, and calling my whole scientific research into the facts and history of the Great Pyramid, on the lines opened up by the late John Taylor, "the Pyramid religion." The continued misuse for a contemptuous purpose, through all three papers, of words considered sacred among all Christians, makes one wonder distressfully at last what sort of ideas of religion itself President Barnard can possibly have. Not very Biblical it would seem, for on his opening page he assumes the history of Adamic man upon earth as wholly an affair of his own voluntary, spontaneous, unaided effort, whereby he raised himself from the lowest stage of savagedom into civilized life and high mental attributes, or in total contradiction to what the Bible says of it. He is profaning the name, objects and character of "religion" to apply it sneeringly to a subject of scientific enquiry only, and which has never been brought forward as a "religion" by those who have studied it; has never been hinted at by them as a method of salvation; never spoken of as a mode of approaching God for the forgiveness of personal sins, nor intended in the slightest degree to alter or supplant a single item in the Gospel of our Lord and Saviour Jesus Christ, though it may, and has most unexpectedly, brought to light remarkable corroborations of some of the primeval divine inspirations in earthly wisdom from God to man. Scientific numbers and facts on which the inspired, long-concealed and anti-Egyptian principles of Great Pyramid metrology rest, for some of its most unexceptionable proofs, having been largely obtained from the ancient monument by myself, it seems a settled object with the president to invalidate me as a measurer, reject my measures, and then present the Great Pyramid metrology to his readers without any of my doings mixed up with it. That, too, is perhaps allowable and understandable enough as a method of war, though I must even then regret that careful mensurations of important parts, not yet measured by any one else, are not to be allowed to appear any more before the world, because forsooth President Barnard has chosen to object to the person who made them. Yet why, after that, does the president next run the same person down with equal or even greater vehemence for *not* having made measures of certain other parts of the Great Pyramid? With no more funds than the little I could squeeze out of my miserable salary of £300 per annum, it was rather a wonder that I could go out at all and do any thing in that expensive region. The president seeks to justify his condemnation by adducing this further fact that, in his own words, "two engineers, Aiten and Inglis, came to Gizeh when I was there to make that very measurement," and did make it "with a thoroughness of which there had been no former example." That was exactly why I kept on working at the other subjects I was engaged on, and did labor at every moment of my time until the day of my forced departure. For is not division of subject, as well as labor, a recognized method everywhere for enabling a few workers to gather an extensive harvest? Or, if I am to be of no authority upon the Great Pyramid because my own measures there, though numerous enough, according to the president, to fill a volume, did not include one of the base-side length, of what standing is President Barnard, who has never measured any thing whatever of the mighty monument, and has not even seen it?

The president, however, is not quite right in saying that Messrs. Aiten and Inglis measured the Great Pyramid's base-side length under my very eyes, for they came rather when I was leaving, made their chief measurements after I was gone, and communicated the results to me only after we were all returned to Scotland. More decidedly, too, is the president wrong in insinuating (p. 117) that I called them "blundering engineers," and declared their measurements to be "to my disgust." Those are *his* choice phrases, and I leave them to him to explain whenever Messrs. Aiten and Inglis may call him to account.

For myself—although more accurate measurements have been taken since then by several parties—I consider Messrs. Aiten and Inglis' result a most important step, very happily made at the time it was, towards the discovery of the truth touching the Great Pyramid's base-side length as intended by its ancient architect. Previous to their visit, the only *socket-defined* measures had given (in British inches) 9164 and 9168, or something like these numbers; and nothing less than 9160, with some few units appended, could be admitted. But when Messrs. Aiten and Inglis announced their mean result to be 9110, and the Royal Engineers gave out 9130 a few years afterward, it was evident that with due scientific regard to all the measurements taken on the ground, and the principles of discussing such observations afterwards, no result so high as 9160 could be entertained; nor, again, any so low as 9110, but that the truth should lie somewhere between, and I came, moreover, early to the conclusion of 9140 being the true quantity to the nearest whole inch.

The third section of the president's attack concludes with a notice of Mr. Flinders Petrie's book, out of which he picks that particular part of the base-side length discussion touching the Great Pyramid, which is computed on the assumed level of the pavement piece near the middle of the side, and makes it, at that elevation, only 9068.8 inches. This quantity the president presents as the only result, so that, positively concealing every thing else which both that anthor and all other Pyramid measurers for a long time past have had to say with regard to the original and Scripture-justified base-side length depending on the sockets cut into the rock at a lower level, and reaching there in one case to more than 9139 inches in length, the "Very Reverend" President expressed himself thus:

“The form of the base is sensibly square. The side of this square has been hitherto the unknown quantity in the Pyramid religion, but it has been a fundamental article in the creed that it should measure just 9140 British inches. By the inexcrable laws of trigonometrical science it is proved to measure, in fact, only 9068.8 British inches. With this determination the beautiful union of the sacred cubit and the length of the tropical year melts away into the air, to be heard of no more among men.’’

Than such a sentence as this, wilful perversion, misstatement and concealment of facts, can no further go.

The coffer subject is taken up chiefly towards the end of the second and beginning of the third part of the president’s essay.

That very little reliance, in his opinion, can be placed on my measures there, the president (p. 294) implies, not from any new discoveries of his, but merely from my own numbers, purposely published by me long ago, to exhibit the discrepancies of different methods, but yet the convergence of certain commensurabilities; as thus, for the capacity of the coffer:

From direct interior measures,	71.317	cubic	Pyramid	inches.
From exterior measures, halved,	71.160	“	“	“
From seam of bottom and sides,	71.266	“	“	“

He allows, however (p. 213), that “the contents, by different methods, vary from a little above to a little below 71.250 cubic inches,” but makes it his chief contention that my theoretical explanation of that quantity is obtained by using false numbers. I had looked on it as the tenth part of the cube of the ten-millionth of the length of the earth’s polar axis in inches, multiplied by the mean density of the earth. And that the president allows is not wrong in itself, but only in the flagrancy of my having taken (as he is bold enough to aver) a value of the axis of the earth divided by ten millions (viz., 50.05 British inches) “which no computer has ever found,” and a number expressive of the earth’s density (5.7) “which no investigator has ever reached.”

Yet what investigators have reached in this latter subject, even as given by the president in another paragraph, has varied from Cavendish’s 5.32 in the last century to Airy’s 6.56 in the present! But considering the late Mr. Baily’s quantity of fifty years ago more probable, and calling it 5.66 instead of the 5.675 at which Baily announced it, President Barnard finds my Pyramid-derived quantity of 5.70 too large by 0.04. Why, however, when he is writing for the youth of his country, in 1884, does he not quote the latest and best authority in all physical science, viz., M. Joule, in the Royal Society Proceedings for 1878, bringing out from new experiments of a grand order the number 5.69, or only 0.01 less than my Pyramid quantity? And seeing that so eminent a scientist as Sir G. B. Airy had previously brought out a number 0.86 larger, the Pyramid result of 5.70 cannot be said with any truth to be too large beyond all precedent.

But touching the earlier element in the coffer calculation, viz., the ten-millionth of the length of the polar axis of the earth, in British inches, it is quite true that I had used that quantity as being 50.05 long, whereas the president of Columbia College now pronounces it to be only 49.273 of the same units in length; and then, cubing this terribly smaller number instead of the larger one, and multiplying the result also by his small version of Baily's earth density, in place of the Pyramid quantity, he brings out for the final theoretical contents of the coffer, on my lines of explanation, as he tells his readers, only the miserable 67.865, in place of 71.464 British,=71.250 Pyramid, cubic inches.

No wonder, therefore, that he denounces this 67.865 number, in its littleness, as "a disgraceful break-down of the *rationale* of Professor Smyth's process!"

But is the president, in arriving at it, any more correct in his 49.273 number for the ten-millionth of the earth's axis of rotation than he was with his 5.66 for the earth's mean density? For authority he refers to his own previous statement in another part of his paper, giving the last five, and supposed best, computations in the whole world of the length of the earth's rotation axis, derived from arc of the meridian measures, and then he quietly takes 49.273 as the ten-millionth part of the mean of them all.

But, on referring ourselves for the full, original numbers to his page 122, we find given there, for the length of the earth's polar axis:

By one authority =500, 489, 604 British inches.
By another authority=500, 504, 818.9 British inches.
By another authority=500, 491, 440 British inches.
By another authority=500, 487, 768 British inches.
By another authority=500, 490, 432 British inches.
And by another in a note=500, 532, 230.4 British inches.
By another in a note=500, 550, 410.4 British inches.
By another in a note=500, 369, 956.8 British inches.

And how, out of all or any of these quantities actually given by himself, the learned president of Columbia College can get 49.273 as the ten millionth part, must be a matter of astonishment to the world and of grief to his friends. For, whether it be by a blunder or a perversion, the error is huge enough to throw modern science, as represented by President Barnard, back through the ages two hundred years at least, while it leaves my Pyramid quantity of 50.05 absolutely untouched and irrefragable so far as it goes.—*International Standard*, Nov., 1884.

Prof. Barnard's Book—The Sun's Distance.—. . As the very able paper by the Rev. H. G. Wood, in *The International Standard*, has already taken most of the ground from under the Professor's feet, I will at present only refer to what he has said about the sun's distance. The Pyramid sun distance he describes as "a fact which, to plain human reason and simple common sense, is so grotesquely improbable that its possibility can only be defended by clothing it with the character of miracle;" he then gives the several astronomical determinations which have been arrived at since 1862—thus:

Leverrier,	91,357,000	miles.
Chambers	91,465,000	"
Newcomb	92,200,000 to 92,700,000	"
Young	92,885,000	"
Michelson,	92,876,000	"

He then states that "the distance of the sun, as worked out on the Pyramid theory, is 91,837,000 miles," and concludes by remarking that "the Pyramid distance is, therefore, only about a million of miles too short; while probably the uncertainty which still attaches to scientific deductions is not so great as half a million." How he could venture to make such a statement in the face of the figures he quotes I cannot understand, seeing that the extreme astronomical values differ no less than 1,528,000 miles, while the difference between the Pyramid distance and the mean of all the astronomical distances is only 410,000 miles. Surely he must have formed a very low estimate of the intelligence of his readers if he expects that they will be influenced by such reasoning and statements as he has here employed. To show further how little his statements and opinions are to be relied upon, I may remark that since his book was published the first result of the last transit of Venus has been published by the eminent director of the Brussels Royal Observatory, M. Houzeau, and it gives the sun's distance =91,756,800 miles, or 80,200 miles *less* than the Pyramid distance, which Prof. Barnard says is "only about a million of miles too short!" Pyramidists, therefore, need not feel discouraged or fear that Prof. Barnard's violent but ill-directed attacks will endanger the Pyramid sun distance, or the British inch, yard, and mile.

May I be allowed to ask Prof. Barnard whether the great conveniences for the everyday business of trade and commerce, of the British system of weights and measures over all other systems in use, may not have had something to do with the making of the Anglo-Saxon races by far the richest in the world, and enabling Great Britain to lend money to many nations, and borrow from none? Certainly it has been no check nor hindrance to a progress which is a marvel to the whole world. . .—*Jos. Baxendell, Astronomical Observatory, Southport, Eng., in The International Standard, Cleveland, O.*

THE METRIC SYSTEM.—Coleman Sellers writes from Germany to *The International Standard:* The librarian of Paris Geographical Society gives the population of countries where the French metric system is obligatory as 241,972,011 as against 97,639,825 not using it. In his present visit to these countries Mr. Sellers found in Norway, Sweden and Denmark every thing in the shops weighed in pounds or measured by a yard-stick. The millimeter, taken to avoid decimals, being small, involves many figures, and does not permit any good memorizable series. The cubical litre is not used, but is converted into a cylindrical vessel, with all the trouble of squaring the circle. If a bar of iron one English yard long be planed one inch square, it will weigh ten pounds, and one tenth will weigh one pound more accurately than the ordinary liter of water will weigh one kilo. Swedish iron is rolled and boards are cut to English inches. The English inch is used exclusively in Russian machine shops, and for all screw sizes throughout Germany. The countries which have adopted the French system are, he believes, at a disadvantage from its use. England has lately made legal the admirable standard of Sir Joseph Whitworth, and the chance of her adopting the French system is not in the most remote degree possible.

Bromide of Potassium.—Death on the fifth day, after taking eighty-five grains every four hours for four days, is reported in *Columbus Medical Journal*, December, 1884.

In neuralgia of the dental branches of the quintus trigemini, Czartoryski introduces into the ear (which should be previously cleaned) a pledget of cotton wet with a mixture of equal parts of fluid extracts of belladonna, viburnum opulus, and gelsemium. The effect is said to be almost instantaneous.

Carcinoma.—Dr. Vogt (*Centralblatt fuer Chirurgie*) injected equal parts of turpentine and alcohol several times in the course of two months, in a rapidly growing carcinoma, the result being the shrinkage of the tumor into a hard, inert mass. A multiple sarcoma disappeared after five weeks' treatment. The injection is painful and fever follows, lasting a day or two.—*National Druggist.*

Mercuric Bichloride in Blennorrhagias.—Dr. Constantin Paul (*Le Practicien*) uses solutions of from one to fourteen per cent., according to the amount of inflammation present, with remarkable results. One part to 20,000 of water is sufficient to destroy the gonococcus, which he considers pathognomonic of gonorrhœa.—*National Druggist.*

Erysipelas.—Prof. Da Costa cut short an attack by a hypodermic of one-third of a grain of pilocarpin muriate.—*Louisville Med. News.*

Reduction of Dislocation of Humerus (Dr. Gissler).—(1) The elbow is pressed against the abdomen, and then gently drawn outwards until resistance is met with. (2) The forearm is then raised as high as possible towards the opposite shoulder. (3) The whole arm is drawn outward, and the operation is finished.—*Southern Clinic.*

Peptonized Cod Liver Oil and Milk, 52 per cent. best cod liver oil, is so palatable that children and ladies take it as readily as cream. The digested milk entirely disguises the oil. The only action of the gastric juice upon plain oil is to dissolve the tissue covering the oil globule, and thus to free it for digestion or emulsion in the duodenum. Nothing but *pancreatine*, nature's secretion, can emulsify or digest an oil. Reed & Carnrick have anticipated nature by their laboratory process in the manufacture of Peptonized Cod Liver Oil and Milk, which is ready for immediate assimilation when taken.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D., A. VAN DER VEER, M.D., LORENZO HALE, M.D.,
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. JANUARY, 1885. NO. 1.

ALBANY MEDICAL ANNALS.

Our new style does not indicate any change in our journal nor in its management. The editing committee and the publishing house are the same as before. The substitution of the word "Albany" for "The" in our former title is made simply for the purpose of giving expression in our heading of both "a local habitation and a name." Extracts from our journal will hereafter be credited to ALBANY MEDICAL ANNALS.

MEDICAL LEGISLATION—ARE WE LIKELY TO HAVE A STATE EXAMINING BOARD?

It is well known that for several years urgent efforts have been made to induce our legislature to pass a bill organizing a State Board of Examiners, and that at times we have had great reason to hope for success, yet nothing as yet has been definitely accomplished. That there is a necessity for such a board, few will argue against.

Most of the medical colleges in this state, by their lengthened time of study and requirements from students, are sending out graduates who are well fitted for their work, and are yearly being made better practitioners by special advantages received in attending from time to time the post-graduate courses now so well organized. It is more especially to protect these men who have attended a thorough course of medical lectures from the inroads that are being made upon them by graduates coming from neighboring states, and from *short term colleges*, that action should be taken.

Many of the states have now State Boards for examining all who apply for a license to practice medicine, and the good that is resulting, in elevating the standing of the profession is already being felt.

The committee appointed by the State Society at its last meeting have met several times, and some few of the features proposed in the new bill are as follows:

The state to be divided into two districts—northern and southern—each district to have an examining board, which shall meet in June and October, in New York and Syracuse.

Each board to be composed of six examiners—one for medicine, one for surgery, one for obstetrics and *three* for therapeutics.

Of the six members of the board, two to come from the State Society, two from the colleges and two from the profession, who are not members of the State Society nor of the colleges.

This bill will be fully discussed at the next meeting of the State Society, in February, and after its adoption, with such modifications as seem best, will be presented to the legislature for action.

That this subject is attracting attention in other states is shown very markedly by the action recently taken by the Philadelphia County Medical Society urging the passage of such a bill in Pennsylvania. Dr. John B. Roberts, in an address in favor of a similar law, gives some striking arguments. He says:

> As is known to many of you, a person who desires to practice medicine in Germany must pass a govermental examination. The students study in universities and take degrees, but such degrees do not confer the right to practice. The health and lives of the citizens of the empire are believed too valuable to be imperiled by the acts of ignorant physicians. Hence, although the universities themselves are under the control of the state, the candidate must, in addition to his university examination for a degree, pass a governmental examination for license to follow professional work among the people of his vicinity. He is not a legally qualified practitioner until this is accomplished. Let the medical schools teach, examine and grant degrees as at present, but let no one practice in this state who has not been examined by those who have no interest in passing or rejecting him. In other words, merely substitute for the diploma the certificate of the State Examining Board as the requisite of registration. The greatest advantages derived from such a law would be the protection of the public health from ignorant physicians.
>
> The United States government long ago adopted a similar plan of examining candidates for its army and navy medical services, so that at the present time its soldiers and sailors, even in distant territories and seas, have

an average benefit of better educated physicians than citizens of New York, Philadelphia or Boston. An army or navy surgeon receives his education in any school, but he enters the federal service only after an examination by a board who had nothing to do with teaching him, and who have no pecuniary interest in passing ignorant candidates,

When a State Examining Board is once established, there would be no longer a premium offered for quick graduation after two years' study and a five minutes' oral examination in each of seven branches. Such an examination would weed out and keep out of the profession those people who, though ignorant of medical science, accept professional duties and emoluments, and thus increase the difficulty of an educated physician gaining a livelihood. There are, undoubtedly, too many physicians for the needs of the closely settled districts. Fewer doctors, and better ones, would be a boon to most sections of the state. The state examination would effect both objects.

It will be said that physicians living outside of this state, but near its border, are often called to attend patients in New York. Very well, let them be examined by the New York Board and register in the county in this state nearest their residence. Shall a physician of New Jersey, Vermont, Massachusetts or Pennsylvania practice continuously in New York without being subject to the same examination as residents of the state? Certainly not. Those, however, who come into the state as consultants with duly licensed practitioners of this state should, of course, be excused from the state examination. So should dentists who do not practice medicine, whether residents or non-residents of the state In the same manner midwives, who attend the very poor in cases of confinement, should be exempt from professional examination, though they undoubtedly should be registered, and give some evidence of obstetric knowledge.

A physician changing his residence within the state would merely be required to register in his new locality, but would have to pass no second examination. Nor would those now legally registered and practicing be required to pass the State examination.

It will be urged as an objection that there are physicians who desire to practice special systems of medicine, and that such an examination would exclude these from practice. Not at all. Let the board examine all candidates on anatomy, physiology, pathology, hygiene, surgery, obstetrics, chemistry and materia medica only, omitting theories of medical practice and therapeutics entirely from the schedule. A. VAN DER VEER.

——THE ANGLO-SWISS CONDENSED MILK has won the highest encomiums from the most competent authorities as the best food made for infants and invalids. A treatise on this all-important topic will be mailed free of cost to all applicants by the Anglo-Swiss Condensed Milk Co., 86 Hudson street, New York city, or can be procured of druggists.

——ERRATA.—Page 1, foot note should read *John D.* Whish; page 8, last line, before " water " insert *one hundred parts of.*

——THE *Quarterly Epitome of American Practical Medicine and Surgery*, collateral to *Braithwaite's Retrospect*, Part XX., for December, 1884, reprints from THE MEDICAL ANNALS, September, 1884, "Removal of Nasal Polypi," by D. Fleischman, M.D., of Albany, and the paper on "Anal Fissure" by John Thompson, M.D., Albany, with discussion by Drs. Van der Veer, Sabin, Keegan and Townsend; from THE MEDICAL ANNALS, October, 1884, "Mental Symptoms in Ordinary Disease," and from our June number "Lesions of the Brain in the Insane," both by Jno. Ben. Stonehouse, M.D., Albany.

——MICROBE.—The *Medical Record*, January 3, 1885, page 17, refers to the item that has gone the rounds of the medical exchanges, which attributes to Sédillot the coining of the word "microbe" of two syllables, and adds that Filippo Pacini, of Florence, thirty years ago, described, in the *Gazetta Medica Italiana*, a small organism which he called a "microbio," using a word of four syllables. It also endorses the statement made in THE MEDICAL ANNALS, October, 1884, page 311, that the only excuse for pronouncing "microbe" in two syllables is the French usage; and it insists further that this French pronunciation must be the permanent law in the English language. If we are to receive in our language a word of Greek ancestry, Italian parentage and French speech, it seem proper that, like other alien words, it should appear in italic dress, thus: *microbe.*

LORENZO HALE.

MEDICAL NEWS.

ALBANY MEDICAL COLLEGE.

Alumni Day, with the College Commencement, occurs Wednesday, March 4, 1885. The social alumni salutations and lunch will occupy the time from 9 to 10 in the morning. The annual meeting, including the address by President H. T. Hanks, M.D., of New York city, class of '61, the historians' reports, etc., will fill the rest of the forenoon.

Prof. William H. Thomson, M.D., an alumnus of Albany Medical College, class of '59, and for many years the Professor of Materia Medica and Therapeutics, and of Diseases of the Nervous System, in the Medical Department, University of the City of New York, will deliver the first of his course of Alumni Lectures, on "The Germ Theory of Disease," at 12 M., in Alumni Hall.

The commencement exercises of the Albany Medical College, will be held in Leland Opera House, South Pearl street, at 3 P. M. The eminent John Ordronaux, M.D., LL.D., has been invited to address the graduating class.

Prof. Thomson will deliver the second lecture of his course at 8 P. M. in Alumni Hall, or in Geological Hall, if it becomes necessary.

At the conclusion of the Alumni Lectures the Alumni Dinner will be served at the Delavan House.

A MEDICO-LEGAL SOCIETY—KNIGHTS OF THE SCALPEL AND DISCIPLES OF BLACKSTONE JOIN HANDS FOR MUTUAL BENEFIT.

The meeting of the medical and legal professions at Alumni Hall, Saturday evening, December 20, was called to order by Dr. A. Van der Veer. Mr. D. Cady Herrick was chosen chairman and Dr. Stonehouse secretary. Dr. Van der Veer said:

> From a medical standpoint many cases come up about which legal questions are involved. A joint discussion by the proposed medico legal society would surely result in benefit. The organization might limit itself to forty members and meet once in two months, and as the papers prepared could be printed in medical and law journals they would be accessible as reference and instruction.

Col. King moved and Dr. Lewi seconded that a medico-legal society be formed for the city and county of Albany. The motion was unanimously adopted, and the chair named the following committees, after which an adjournment was taken subject to the call of the chair: To nominate officers, Dr. Van der Veer, Lawyer King, Dr. Bendell, Lawyer Matthew Hale, Dr. Tucker, Lawyer Hamilton Harris; constitution and by-laws, Dr. William Hailes, Jr., Lawyer Buchanan, Dr. Snow, Lawyer Wilkinson, Dr. N. Emmons Paine, Recorder Gould.

Among those present were Drs. Van der Veer, Snow, Fleischman, Stonehouse, L. Hale, Russell, H. M. Paine, Boyd, N. Emmons Paine, M. J. Lewi, Hailes, Bartlett, Henry Hun and Curtis; Lawyers Herrick, Hitt, Hale, Wilkinson, Buchanan, Hamilton Harris, Matthew Hale and King, and Editor Werner, of *The Voice.*

The object of the association is to be the affiliation of, and a more harmonious understanding between, the professions. The embarrassment and frequently unpleasant tilts between members of the bar and medical profession might be avoided by a more thorough understanding between members of the respective professions.—*Albany Journal.*

At a meeting held January 3, the committee appointed to draft a constitution and by-laws made a report.

At a meeting on January 10, the constitution and by-laws presented were, after slight changes, adopted.

Officers elected were: President, the Hon. Hamilton Harris: vice-president, Dr. Albert Van der Veer; recording secretary, Charles J. Buchanan; corresponding secretary, Dr. F. C. Curtis; treasnrer, Norton Chase.

The following gentlemen have enrolled their names as members: Drs. Jno. Ben. Stonehouse, William Hailes, Jr., Willis G. Tucker, Lorenzo Hale, D. P. Shevlin, W. J. Nellis, Henry March, B. U. Steenberg, J. D. McAllister, S. R. Morrow, D. Fleischman, J. D. Craig, S. A. Russell, N. Emmons Paine, U. B. La Moure, John Thompson, F. L. Classen, Theodore P. Bailey, Norman L. Snow, H. Bendell, Charles F. Scattergood, H. M. Paine, Franklin Townsend, Jr., N. Hunting, A. Van der Veer, F. C. Curtis, W. E. Milbank, George S. Munson, M. J. Lewi, C. E. Jones, L. Balch, W. N. Hays, C. H. Crawford; Lawyers Norton Chase, F. C. Ham, M. D. Conway, W. H. King, D. Cady Herrick, Hamilton Harris, W. S. Hevenor, Galen R. Hitt, H. E. Smith, Thomas E. Wilkinson, John F. Manson, John M. Kimball, James Fanning, W. W. Thompson, Charles J. Buchanan, Eugene Burlingame, and Mr. Edgar S. Werner.

THE ALBANY BASIN NUISANCE—PRONOUNCED A MENACE TO PUBLIC HEALTH—ABSTRACT OF THE REPORT TO THE STATE BOARD—THE WATER SUPPLY TAKEN FROM THE VICINITY OF A GIGANTIC CESSPOOL.

Director Gardiner's report to the State Board of Health, December 17, on the condition of the Albany basin is accompanied by surveys and experiments made by Engineer Horace Andrews. Following are some of the most important points in the report :

The pier, which forms the basin, is about 5,900 feet long; the basin is from 50 to 450 feet wide containing some 30 acres. Into the northern end of the basin opens the Erie canal. The basin has three openings, and it is expected to maintain in it seven feet of water at low tide. The basin has, however, become filled with mineral and organic matter from two sources, so that now, at low tide, from five to six acres of the bottom are laid bare, and the remainder of the basin has become so shallow that it is not navigable at low water, except where, by constant dredging, sufficient depth is maintained. It has been filled at the northern end and along the pier by silt brought down the Hudson river in time of flood. The second cause of the filling of the basin is the fact that 15 sewers of the city of Albany empty into it. These 15 sewers drain 750 acres of the most thickly populated part of Albany, carrying off the waste of some 32,000 people. It is estimated that 1,200 cubic yards of material are annually brought down into the basin by these sewers, of which probably at least half, or 600 cubic yards, are deposited in the basin. The examination of the deposits show that over a large part of the basin the bottom is a mass of black, decomposing organic matter, filled with a writhing mass of worms and microscopic organisms. There can be no question that the maintaining of a gigantic cesspool, 30 acres in extent, on the principal water front of the city of Albany, is contaminating the air of that part of the city and needlessly endangering the lives and health of all who are brought within its influence. The polluted waters of the basin, Director Gardner continues, not only contaminate the air, but are almost certainly reaching the water. The intake pipe for the pumping works passes under the basin, and draws its water from the pier front, 1,200 feet above the Maiden lane opening in the basin. The channel passes close to the pier. It is 12½ feet deep in its centre, and the centre of the channel is only 125 feet from the intake pipe. At the time of the experiments the flood current set northward 3,400 feet, running about three hours. It took about one hour for the water in front of the Maiden lane outlet of the basin to reach the inlet pipe of the water works For two hours this water was running northward past the intake pipe, and then when the tide turned this water ran back in about an hour. For three hours of each tide, therefore, the water pumped into the city comes from below the Maiden lane outlet of the basin, which water the basin has emptied out in the last hours of ebb tide. The pumps of the water works are kept going for some twenty hours each day without any reference to the state of the tide. Polluted water is also emptied out of the basin at the northern end: the river above the basin also receives deposits from Patroon creek. Mr. Andrew's experiments show that it is impossible for the polluted water from the basin to purify itself before reaching the water works' intake. Director Gardiner further points out that the only remedy is for the city to build an intercepting sewer parallel with the river, into which all the sewers of the city shall empty, which should carry the sewage to some point so far below the city that it would not return with the flood tides. The basin should either be dredged out or filled up: either would answer the sanitary requirements of the case, but it would be better to keep the basin open. The legislature should provide the means for the execution of this work by the superintendent of public works as early as spring will allow, as its postponement until low water would greatly endanger the water supply of the city. The committee recommend that the city take measures to ascertain whether a purer supply of water cannot be obtained, and make the following recommendations: First, that the governor declare the Albany basin a nuisance; second, that he order the superintendent of public works to dredge the basin as early in the spring as the work can be executed, to such a depth that at low water there shall be at least three feet of water covering the entire bottom; third, hat he prohibit the city of Albany from pouring any of its sewage into the basin after January 1, 1886.—*Albany Journal*, Dec. 23.

The State Board of Health expressed the following conclusion:

In view of the facts stated we conclude that the Albany basin in its present condition is a nuisance endangering the health of the citizens of Albany and of all persons brought within its influence by the effluvia emitted from the sewage deposits at low tide and by probable contamination of the water supply of the city of Albany; that in view of the fact that the Albany basin is a part of the Erie canal and, therefore, the property of the state, it is the duty of the state either to clean out the basin or to fill it up, abating the nuisance by whichever way may be best for the interests of commerce and navigation, to serve which the basin was constructed; that as the principal cause of the Albany basin being a nuisance is the pouring into it of the sewage of the city of Albany, the use of the basin as a receptacle of the sewage of the city of Albany should be forbidden by law, giving reasonable time for the city to construct an intercepting sewer which should deliver the sewage below the city; that the water supply of the city of Albany is now probably contaminated by the polluted waters of the Albany basin; and that while the cleaning of the basin and the building of an intercepting sewer will very much lessen the danger from polluted drinking water, yet the fact that such a large population deliver their sewage into the river within six miles above Albany renders it desirable that a supply of water less liable to contamination should, if possible, be found for the city.—*Albany Journal*, Dec. 17.

City Surveyor Bingham says of the proposed basin sewer:

The project of making an intercepting sewer from the "little basin" to a point south of the steamboat landing is entirely feasible, and would intercept all the sewage now emptied into the basin south of the canal lock. The sewer would have to be a large one with overflow outlets into the basin for the release of excess quantities of storm water. It would also have to be provided with a flush water tank supplied either from the "little basin" of the canal or the water supply, because the grade of the bottom of the Albany basin is so slight. As to the cost—well, the sewer would have to be 4,000 feet long, and could be constructed in a good manner of brick and cement for $12 a foot. This would give a tube 10 feet in diameter. Another plan which is thought favorably of is to have the railroad companies fill in the basin and leave a channel on the east 200 or 150 feet in width. The basin now is 200 feet at the narrowest places, at Hamilton street and Livingston avenue. A dock built on a straight line from these two points could be managed so as to create a current so that whatever sewage or other matter goes into the basin would be carried into the river at the steamboat landing. This is the best plan, because the cheapest. The land would be worth the filling for railroad purposes. Something should be done to give us better drinking water and remove the sources of disease—the accumulations of filth in the basin.—*Albany Journal*, Dec. 19.

PERSONALS.

—Dr. E. E. Brown ('79) removed to 164½ South Pearl street, Albany.

—Dr. Lothrop A. Willis, born in Charlton, Worcester county, Mass., February 2, 1824, and a graduate of the Albany Medical College in 1849, died at his residence in Brooklyn, Jannary 2, 1885.

—Dr. Martin J. Dwyer ('83) has completed his term of service in the Albany Hospital, and opened his office at No. 137 Eagle street, Albany.

—Mr. Douw H. Fonda, the well-known druggist of this city, has been appointed a member of the committee on drug market, by the National Wholesale Druggists' Association, a mark of confidence and esteem of which our townsman is well worthy.—*Albany Journal.*

—Dr. William O. Stillman ['78], a former Albanian and a brilliant young physician, who has been absent nearly seven years, has opened an office at No. 86 South Swan street, this city. He purposes to settle down and make Albany his future abode—*Albany Journal.*

EUROPEAN TRAVEL.

Editor Albany Medical Annals:

Sir—In the effort to meet your kindly persistent demand for a few notes of travel from my summer vacation, I do not ignore the fact that such notes as I shall give do not merit a place in a medical journal. My going abroad was not for "study and observation in foreign hospitals," but rather to escape professional anxiety, other than the care of our own party of seven, all in tolerably good health, and all looking forward to four months of rest and recreation. This expectation was realized in the highest degree.

We left New York by steamer "Aurania" July 9, 1884. Landing at Queenstown, Ireland, we found ourselves at once on historic ground, with the past presenting itself as a vivid reality, possible only at its place of achievement.

It followed that in place of visits to hospital wards for the study of the improved methods of older countries, their humane surgery, a possible vivisection, or some surgical curiosity, we made ourselves familiar in thought with other work, by bloody hands of long ago that signed death warrants lightly; saw in high art the smile on lips that doomed to death friend and foe alike, as self-interest dictated; contemplated the work of the guillotine; shrank from the dizzy depths of the castle's *oubliette* and the still more horrible tying stake of the *auto da fé* of the dread past.

Our route of travel was selected with deference to the best experience of tourists, and deliberately revised and amended from time to time to include *detours* of newly found interest. By battle fields of old, by moated wall and palisade, past many a point where edicts of cruel war or leagues of peace were made, through chambers with royal treasure fraught, through corridors of courtly gallantries long gone, through lanes where was wont to be heard the song of the Troubadour; to the cradle of English and our own literature, there to pay the loving homage of our reverence; to the several "firesides where genius has fed her infant brood;" through galleries of art where Art has been mistress; through cathedrals where grand conceptions of human thought have found enduring monuments; through the land where human industry and a more than human vigilance have made and kept a land in the midst of the sea; up the Rhine with its castles, its vineyards and its bridge of boats—a river great without size; so on to the Alps, more grand than any thing yet seen; to Venice and the Adriatic, where fear of the cholera and the certainty of quarantine at more southern points arrested our progress. Having spent a week in this still beautiful city—a wonder in its origin, its architecture, its growth and its decline—we returned to Liverpool by another equally interesting route.

We did not attend the International Medical Congress at Copenhagen, but we saw the inauguration of the present revolt in Belgium by a popular turnout on a Sunday in the streets of Brussels. Belgium's capital had not

"Gathered then
Her beauty and her chivalry,"

but quite another human element, in the disaffected from all parts of the kingdom. We also saw a representation of the canonization of Charles the Good—a glittering pageant, the first of waning centuries, in which

> "They who live in history
> Seemed to walk the earth again."
>
> "Stately dames, like queens attended,
> Knights who bore the fleece of gold."

All this in the

> "Ancient town of Bruges,
> Heard the tolling of the bell
> From the belfry old and brown,
> In the market place of Bruges."

We reached New York October 25, by steamer "Oregon." Let me say to those who have earned a short respite from duty, and who need such a reminder, that the Atlantic is an effectual barrier to professional calls and a highway to the treasure house of ages, that it is well sometimes to cross.

MARY DUBOIS, M.D.

192 HAMILTON ST., ALBANY, *Jan.* 7, 1885.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

ABSTRACT OF THE MINUTES OF THE ANNUAL MEETING, HELD OCTOBER 14, 1884.

The annual meeting of the Medical Society of the County of Albany was held in Alumni Hall, Tuesday, October 14, 1884.

There were present President Bendell, Vice-President Archambeault, Secretary Bartlett, Treasurer Bailey and the following members: Ball, Barker, Bigelow, Boudrias, Boyd, E. E. Brown, R. J. Brown, D. C. Case, R. D. Clark, Classen, Cook, J. D. Craig, Crawford, Culver, Curtis, Elmendorf, J. D. Featherstonhaugh, Fisk, Fleischman, A. Fowler, William Hailes, Jr., Lorenzo Hale, Hall, Hallenbeck, Haynes, Hays, Healey, H. Hun, Keegan, La Mouré, Joseph Lewi, Maurice J. Lewi, Lyon, March, Mereness, Merrill, Miller, Mitchell, J. W. Moore, Morrow, Murray, T. W. Nellis, W. J. Nellis, H. S. Paine, Peltier, Perry, S. Peters, Porter, Purple, Riley, Rouchel, R. H. Sabin, Shanks, Smith, Snow, B. U. Steenberg, Stonehouse, Thompson, Townsend, Trego, Tucker, Van Allen, Van der Veer, Van Vranken, Ward, Witbeck—70.

The meeting was called to order at 3:30 o'clock P. M.

The minutes of the last semi-annual meeting were read and approved.

Dr. N. L. SNOW, chairman of the Board of Censors, reported that the Board had examined the credentials of Dr. C. C. Schuyler, of Troy, and found them correct; the regular initiation fee having been paid, they recommended him for non-resident membership in the Society. On motion the report was accepted and adopted.

The Treasurer, Dr. T. P. Bailey, reported: Receipts, $214.55; expended, $151.47, leaving $63.08 balance on hand.

The President appointed, on motion, the following persons as Auditing Committee: Drs. Keegan, A. Fowler and Witbeck.

Dr. T. K. PERRY, chairman of the Committee on Registration, reported as follows:

Mr. President:

A permanent committee, such as the one from which I report, having in charge a work at no time arduous or copious, and having, moreover, from previous experiences, such work well in hand, cannot, from the very nature of the case, present to the Society at this time more than a brief. It has been our custom since the appointment of the committee, and from the date of the act making it obligatory on all practitioners to register in the County Clerk's office, to each year consult said register and embody in our report a record of same, with requisite data, etc., and in this way keep our members in information of who is and who is not lawfully entitled to the practice of our profession in this county, and which, if any, have enrolled themselves as members of this Society. This may or may not be pertinent to the especial function of your committee, but it has seemed to us appropriate, as it serves to keep on record a few quite important facts which might not otherwise be attainable without some little trouble.

In accordance with the foregoing, we have to report the following names recently registered: D. O. Malette, Laval University, Montreal, Can.; W. O. Hoffman, Iowa State Medical College; Hamilton Holliday, Albany Medical College; J. V. Hennessy, A. M. C. Of these, as yet, none have become members of our Society.

The following named members were duly elected to membership at our last semi-annual meeting, but have not signed the register: Dr. G. S. Knickerbocker, College of Physicians and Surgeons, New York: Dr. E. C. Hallenbeck, Bellevue Medical College; Dr. James D. Craig, A. M. C.; Dr. J. H. Mitchell, A. M. C.; Dr T. F. C. Van Allen, A. M. C.; Dr. R. J. Brown, A. M. C. Also to non-resident membership, Dr. C. C. Schuyler, Troy, N. Y., A. M. C.

The members who have died during the year are Drs. J. B. Rossman, John W. Mann and C. P. Staats. Dr. Rossman joined this society in 1837, Dr. Staats in 1859, and Dr. Mann in 1883.

Dr. FRANKLIN TOWNSEND, Jr., stated that the Dr. Hennessy mentioned in the report had removed to Little Falls.

On motion the report of the committee was accepted.

Having reached the order of business the "election of members," the Secretary, by motion, was instructed to cast one ballot for Dr. C. C. Schuyler, of Troy, non-resident member of the Society. There appearing no objection, it was done and Dr. Schuyler declared elected.

Dr. WILLIAM HAILES, Jr., moved that when the Society shall have finished the order of bnsiness, "amendments to the by-laws," it take a recess until eight o'clock in the evening, then to meet at the Delavan House. Action on the motion was deferred.

Dr. F. C. CURTIS moved a vote of thanks to the Albany Institute for their courteous invitation for the Society to be present at Dr. Alfred L. Carroll's address before that body. Carried and the Secretary instructed to convey such thanks.

Dr. N. L. SNOW called up his amendment to the by-laws, notice of which had been given at the last semi-annual meeting. The Secretary then read the proposed amendment, as follows:

"To be called Article 8 of Chapter VI. All members failing to attend the annual and semi-annual meetings shall pay a fine of fifty cents to the Treasurer for each and every such offence."

A rising vote resulted two for and thirty against. Lost.

The motion for recess was then put and carried, with only two votes in the negative—Drs. R. H. Sabin and D. Fleischman.

The Society re convened in parlor 57 of the Delavan House, and was called to order by the President at 8:30 P. M.

There were present as guests Dr. Alfred Ludlow Carroll, Secretary of the State Board of Health; Drs. Carson and N. E. Paine, John A. Sleicher, editor of the *Albany Evening Journal*, and Hon. St. Clair McKelway, editor of the *Albany Argus*.

Dr. P. J. KEEGAN, of the committee to audit the accounts of the Treasurer, reported that they had examined the same and found them correct.

The next order of business being the election of officers for the ensuing year, the President appointed as tellers Drs. Perry, Steenberg and T. W. Nellis.

Dr. P. J. KEEGAN moved that as there appeared to be but one ticket in the field the Secretary be instructed to cast one ballot for the persons named on that ticket. Dr. J. W. Moore seconded the motion. The motion was carried unanimously.

The Secretary then cast the ballot for the ticket, which read as follows:

For President—J. D. Featherstonhaugh, M.D.

For Vice-President—T. Kirk. Perry, M.D.

For Secretary—Jno. Ben. Stonehouse, M.D.

For Treasurer—U. B. La Moure, M.D.

For Censors—William Hailes, Jr., M.D., W. J. Nellis, M.D., F. L. Classen, M.D., T. P. Bailey, M.D., Samuel R. Morrow, M.D.

For Delegates to State Medical Society—Herman Bendell, M.D., James P. Boyd, M.D., D. H. Cook, M.D., C. S. Merrill, M.D.

For Delegates to Rensselaer County Medical Society—C. E. Witbeck, M.D., R. D. Clark, M.D.

For Delegates to Schoharie County Medical Society—D. C. Case, M.D., T. W. Nellis, M.D.

For Delegates to Montgomery County Medical Society—M. J. Lewi, M.D., W. N. Hays, M.D.

For Delegates to Schenectady County Medical Society—J. U. Haynes, M.D., John Thompson, M.D.

For Delegates to Columbia County Medical Society—A. Van der Veer, M.D., F. C. Curtis, M.D.

For Delegates to Union Medical Association—P. J. Keegan, M.D., David Fleischman, M.D.

For Delegates to Central Medical Association—A. B. Huested, M.D., J. C. Healey, M.D.

The Vice-President, Dr. J. L. Archambeault, having taken the chair, the President, Dr. H. Bendell, delivered the annual address, taking for his subject, "Nearsightedness in our Public Schools; its Cause and Prevention." [See page 353, THE MEDICAL ANNALS, December, 1884.]

At its conclusion, on motion of Dr. C. S. Merrill, seconded by Dr. S. B. Ward, the thanks of the Society were extended to the President.

On motion of Dr. Tucker the Society adjourned to partake of a banquet.

E. A. BARTLETT, M.D., *Secretary*.

ALBANY
MEDICAL ANNALS:
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DISEASE OF NASO-PHARYNX AS A CAUSE OF DEAFNESS.*

BY HERMAN BENDELL, M.D., ALBANY.
Albany Medical College, 1862.

The frequent occurrence of deafness, in connection with disease of the naso-pharyngeal cavity, forcibly suggests the importance of careful examination and early treatment of the adjacent organs, associated by continuity of their lining membrane with the middle ear. The presence of inflammatory changes in the eustachian tubes and tympanic cavity, be the same of an acute or chronic character, of a suppurative or non-suppurative form, accompanied with or without impairment of hearing, has its origin, in a large percentage of cases, in some abnormal changes in the mucous membrane lining the nose and pharynx. It is remarkable that many of the symptoms indicating a diseased condition of the mucous membrane of the naso-pharyngeal cavity, especially such pronounced symptoms as snuffles, impeded nasal respiration and snoring, and those symptoms so frequently the accompaniment of infancy and childhood, should be generally overlooked, and as a rule pronounced to be of little or no consequence, until the anxious parent or patient, alarmed by the persistency of an offensive discharge from the ear, coupled with partial or total deafness, consults the specialist for an explanation of the causes, and the chances of treatment for the restoration of the hearing power.

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* Read before the Medical Society of the County of Albany, Wednesday evening, December 17, 1884.

The causes tending to a development of catarrhal disease of the mucous membrane lining the nose and pharynx are, in a large percentage of cases, the sequelæ of diseases incident to infancy and childhood, and the responsibility of failing to provide early and timely treatment—that is, before the mischief caused by this disease is beyond repair—must be assumed by the practitioner, who oftentimes fails to recognize the importance of checking catarrhal inflammation of the naso-pharynx before the middle ear is implicated and deafness has resulted. In looking over the history of the many cases of acute and chronic otitis media which have come under my observation, I am convinced that the primary and predisposing cause in exciting and maintaining catarrhal disease of the middle ear is, in seventy-five per cent. of cases, due to abnormal changes in the mucous membrane lining the nose and pharynx. The existence of acute or chronic catarrhal inflammation, the presence of adenoid vegetations, or any abnormal changes in the naso-pharynx, if not early arrested by proper treatment, will eventually set up, by spreading through the pharyngeal entrance of the eustachian tube, disease of the middle ear. It is also by this channel of communication that the inflammatory changes in the naso-pharyngeal cavity, associated with exanthematous disease, especially in scarlet fever and measles, are apt to invade the middle ear and establish disease of such a character that it will, if not prudently managed at the outset, result in incurable deafness. The frequency of chronic purulent inflammation of the middle ear, commonly known as otorrhœa, can generally be traced to the causes above mentioned.

Acute and chronic catarrhal conditions of the naso-pharyngeal cavity are accepted as predisposing causes for the development of inflammatory changes in the middle ear. It will, therefore, not be out of place at this time to briefly refer to the process by which catarrhal disease of the naso-pharynx is communicated to the middle ear through the eustachian tubes. The eustachian tube acts as a ventilator for the cavity of the tympanum, and forms a channel for the escape of mucus from the middle ear; hence any change or obstruction interfering with the normal ventilation of the ear, be the same caused by closure due to abnormal growths, by inflammatory condition in the mucous lining, or by structural changes in the walls of the tubes, eventually destroys the patency of the same and disturbs the free interchange of air between the outer atmosphere and the tympanic cavity. The spreading of catarrhal disease from the naso-pharynx to the mucous lining of the eustachian tube necessarily, to a greater or lesser extent, interferes with the normal ventilating function of the tube, and by the rarefaction of air in the middle ear the drum membrane and ossicula are forced inwards, and the structural changes resulting from this obstruction rapidly deprived of their vibrating power, develop irreparable deafness.

In acute catarrhal disease of the naso-pharyngeal cavity, the inflammatory process, extending into the eustachian tubes, causes a slight swelling of the lining membrane, with increased secretion of mucus; and even if this inflammatory process spreads to to the tympanic cavity, it readily yields to timely and proper treatment, but in the chronic and neglected forms of catarrhal disease, the structural changes in the eustachian tubes and middle ear are of such a character that no encouragement should be given to the patient for the restoration of the hearing power. In many cases of chronic otitis media, especially those of a suppurative form, and when the discharge is of an offensive nature, the assurance that treatment will arrest the discharge is of sufficient encouragement to the patient that he will gladly submit to treatment. Caution should govern all promises for the restoration of the hearing power in cases of chronic suppurative inflammation of the middle ear. The predisposing causes, by reason of easy access to the naso-pharynx and the discharge from the ear, will yield to treatment, but the changes which have taken place in the eustachian tubes and middle ear, and to which the total or partial deafness resulting is due, are permanent and irreparable. The intensity of acute and chronic catarrhal disease of the middle ear is largely governed by the condition predisposing to the same in the naso-pharynx, and the condition of the naso-pharynx is oftentimes dependent upon bronchial and and pulmonary troubles; hence the importance of careful examination of the throat and chest, together with diligent search for the causes that produce disease of the tympanic cavity, which will greatly assist the treatment and prognosis. The experience of every practitioner will justify the assertion that a large number of people of all ages, sex and classes are victims of catarrhal disease of the naso-pharyngeal cavity, and it is safe to say that fully thirty per cent. of such people suffer more or less from impairment of hearing. The indifference and little encouragement with which this class of patients are advised by physicians frequently compels them to seek the service of charlatans, who loudly and with flattering testimonials advertise their skill in curing these chronic ailments. How many of these unfortunate patients are incapacitated, in consequence of partial or total deafness, to enjoy the comforts of life, and deprived, in consequence of an offensive discharge from the fauces and ear, to mingle in the pleasures of society, only those who are daily brought in contact with the large number of patients seeking relief from this most annoying disability can best judge. It is a fact to be regretted that with singular indifference many physicians fail to recognize the importance of conquering the early symptoms of catarrhal disease of the naso-pharyngeal cavity — and of thus placing the patient beyond the chances of contracting a disability likely to result in incurable deafness, notwithstanding the assurance that prompt treatment of these cases may prevent a partial or total loss of hearing—and cling to the erroneous belief that no harm can result from a progressive suppurative inflammation of the pharynx, nasal passages and middle ear. Every practitioner of medicine should be qualified to readily diagnose any abnormal changes occurring in the naso-pharynx and eustachian tubes; he should be especially watchful in cases of scarlet fever and measles, and by daily examination of the naso-pharyngeal cavity and middle ear prescribe, when necessary, proper treatment.

In the management of exanthematous diseases it is important to note the condition of the ears during the several stages of the disease, for it is safe to say that in all cases of acute and progressive exanthema the eustachian tubes participate in the general febrile and inflammatory condition, and if timely treatment and attention be directed to these parts, the large percentage of incurable cases of deafness and chronic otorrhœa resulting from neglected treatment will be materially reduced. In scarlatina associated with diphtheria, and in small-pox, the occurrence of inflammatory changes in the eustachian tubes and middle ears are of such virulent nature that unless vigilant care is exercised by physician and nurse the conditions eastablished speedily result in permanent impairment of the hearing power.

In searching for the causes that predispose to catarrhal disease of the naso-pharynx and middle ear, statistics clearly demonstrate that a large percentage of those cases are the result of diseases incident to infancy and childhood; and, in connection with this fact, it is well to add that the peculiar susceptibility of the lining of the naso-pharyngeal cavity in children, owing to a more active and plethoric condition of the blood vessels and a more liberal development of the glandular tissue, especially surrounding the orifice of the eustachian tube and covering the pharyngeal arch, predisposes to inflammatory disturbances; and it is owing to this undue activity of the vessels and strongly developed glandular tissue that children when suffering from coryza, influenza or an acute exanthema, are more susceptible to the development of catarrhal disease than persons of a more mature age.

In considering the many local causes surrounding the habits of children that predispose to the development of naso-pharyngeal ailments—in the home circle frequently subjected to the inhalation of the impure air of poorly ventilated rooms and crowded nurseries, during out-door sports exposed to the changes of temperature, during the period of school life brought in contact with the irritating effect of an atmosphere loaded with innumerable particles of chalk crayon and frequently impregnated with gases from defective drainage and heating—does it not stand to reason that the naso-pharynx, as a part of the respiratory tract, during childhood is more exposed to the influences predisposing to catarrhal inflammation than in adult life?

In infancy and early life the intimate connection of the dura mater with the cavity of the tympanum, at the juncture of the petrous with the squamous portion of the temporal bone, demands that the symptoms and progress of catarrhal inflammation of the middle ear should be carefully watched; for, owing to the anatomical relations above mentioned, there is danger of the inflammation extending to the membrane of the brain and developing intracranial disturbances. The danger of cerebral complications in diseases of the middle ear in young children is equally as great in the acute and non-suppurative as in the chronic and purulent forms of otitis media.

In children suffering from acute and chronic aural catarrh, a partial or complete closure of the nasal passages materially interferes with the respiratory act, and greatly disturbs the equilibrium between the internal and external interchange of atmospheric pressure, causing a rarefaction of air in the tympanic cavity and constituting a condition favorable for the development of deafness. Inability to breathe by the nose is a symptom frequently observed in children, with which every physician is familiar; it is a condition which greatly annoys the patient, and a common feature resulting from an influenza or cold. As a rule no importance is attached to this condition. Its presence is generally claimed to be dependent, and justly so, upon the severity of an attack of influenza or to a common cold, and if nature fails to remedy the trouble, the patient reaches the age of maturity with a chronic nasal catarrh and its detrimental consequences. Impeded nasal respiration is a symptom of abnormality of the naso-pharynx, the presence of which it is essential to consider in all forms of catarrhal disease of the middle ear. It may be accepted as an inflammatory and hypertrophied condition of the mucous lining of the naso-pharyngeal cavity, of malformation of the turbinated bones, of nasal polypi, of the presence of adenoid growths in the post-nasal space, and as exercising, by interfering with normal respiration, an important factor for the development of catarrhal inflammation of the middle ear and subsequent deafness. Usually this condition is ascribed by physicians to a force of habit, with the belief that the same will yield as the child grows older without the aid of therapeutic or operative treatment, and unfortunately this erroneous belief is the cause of the general chronic character of this trouble, with its nasal, pharyngeal and aural complications, which specialists are so frequently called upon to remedy in connection with partial or total deafness. It is the duty of the physician to urge the importance of prompt treatment in the incipient stages of nasal obstruction and to remedy by therapeutic or operative procedure the presence of any pathological changes of the nasal air passages. Prompt treatment for the relief of nasal obstruction will prevent inflammatory disturbances in the pharynx and middle ear, and abort the danger of disabling the patient, not only by a loss of the acuteness of hearing, but also by destroying the sense of smell and materially reducing the resonant clearness of the voice. The annoying and oftentimes serious consequences likely to result from this impediment demand prompt and energetic treatment tending to a radical cure of the same.

Acute catarrhal inflammation of the mucous membrane lining the pharynx frequently, by reflex irritation, produces a vascular condition of the drum membrane and impairs the acuteness of hearing without the presence of any trophic changes in the eustachian tubes and middle ear. This form of catarrhal disease has a tendency to recurrence, and in many people there exists a predisposition for development of acute pharyngitis upon the slightest exposure to the changes of temperature. In many cases the repeated occurrence of this trouble eventually develops a hypertrophied condition of the mucous membrane and glandular tissue of the vault of the pharynx, and this chronic condition, extending to the eustachian tubes, seriously interferes with normal hearing. Recurring attacks of pharyngitis are decidedly operative in causing abnormal changes in the eustachian tubes and middle ear, and the importance of energetic treatment tending to relieve this fluctuating pharyngeal inflammation must not be overlooked. The presence of growths or vegetation in the pharyngeal cavity undoubtedly induces — especially when the same are located close to the orifice of the eustachian tube, either by obstructing the mouth of the tube or producing inflammatory changes in the mucous lining—a diminution of the normal acuteness of hearing, and it is the disability resulting from deafness, and not from these excrescences that prompts the patient to apply for treatment. Failure to remove these growths by surgical or chemical means renders all treatment for the restoration of the heartng power ineffectual.

It is claimed that the existence of adenoid growths in the post-nasal or pharyngeal space, and their association with a condition in the eustachian tubes and middle ear interfering with the hearing power, are not of as frequent occurrence as demonstrated by the researches of many eminent specialists, who have endeavored to convince the profession that the frequency of such symptoms as impeded nasal respiration, snuffles, and especially snoring, indicate the existence of these growths, and that the diminution of the hearing power, when associated with such impediments, can invariably be traced to the presence of abnormal growths in the naso-pharynx.

On a former occasion I presented to this society the history of several cases of deafness resulting from adenoma at the vault of the pharynx, and the happy results attained in restoring the normal acuteness of hearing by operative treatment for the removal of these growths. Since then experience has thoroughly convinced me that deafness resulting from post-nasal and pharyngeal growths, especially among children, is not of rare occurrence; and, judging from the cases that have come under my observation, both in private and dispensary practice, I am satisfied of the correctness of the theory that the predisposing cause of deafness, in all cases where the presence of these vegetations are diagnosed, can safely be traced to the changes produced in the pharynx, eustachian tubes and middle ear by the existence of adenomatous tumors.

Aural diseases from causes that can be traced to abnormalities in the naso-pharynx, with the exception of those cases that are chronic in character, and where the loss of hearing is due to structural changes in the eustachian tubes and middle ear, promise encouraging results when proper attention and treatment are devoted to the patient before serious complications are developed.

The frequency of aural diseases during the period of infancy and childhood, and the general lack of importance attached to prudent management of a condition likely to result in irreparable structural changes, clearly points to the fact that many of the causes developing partial or total deafness are due to ear troubles contracted during early life. It is no longer a theory, but an established fact, that aural complications are the frequent accompaniment of ailments incident to infancy and childhood, and the profession can scarcely fail to appreciate the efforts of the specialist in directing attention to the fact that the large percentage of cases of incurable deafness will be materially reduced by a proper knowledge of the pathology and therapeutics of aural diseases.

DISCUSSION.

Dr. C. M. **Culver** said he could hardly hope to add to the interest in this subject which the reading of the paper had awakened, but briefly recounted the history of a case, occurring in his own practice, which had remarkably demonstrated the intimacy of the relationship between pharyngeal affections and those of the middle ear.

Dr. T. F. C. **Van Allen**: I must differ with Dr. Bendell when he speaks of acute inflammation of the nasal mucous membrane as sometimes accompanied by a reflex congestion or hyperæmia of the membrana tympani without the middle ear being affected. I think this state of the membrane in these cases is always associated with much the same condition of the mucous membrane of the middle ear.

There is no denying that naso pharyngeal disorders frequently are the primary cause of ear catarrh, but how often adematous growths are found is undecided. It was Meyer, I believe, who tabulated a number of cases of growths in the naso-pharynx. He found the hearing affected in seventy-five per cent., but this was due to direct interference with, or pressure upon, the eustachian tubes in but one per cent. or less. Growths "blocking the eustachian opening" must be of rare occurrence. The ear disorder is rather due, as Dr. Bendell also mentions, to the continuity of the mucous membrane of the pharynx and eustachian tube, and thus continuity of inflammation.

Villous vegetations are more common than larger truly adenomous growths.

Bosworth, of New York, almost a year ago, read a paper on the subject, and astonished the members of the Academy of Medicine by turning the speaker's desk into a pathological museum, by covering it with bottles containing naso-pharyngeal adenomata, which he had removed. The general opinion seemed to be that Bosworth exhibited more adenomata than all the rest of the specialists together had removed in some time. It is strange that some find so many of these growths and others do not.

Dr. D. FLEISCHMAN: I would ask for information with reference to diseases of the eustachian tube not consecutive to naso-pharyngeal disease, if any such have been described.

As to the treatment of young children subject to catarrhal disease, local treatment is much more easily effected than is generally believed, and in the case of children as young as two years, and rarely younger, local treatment at home by means of sprays has been not only markedly beneficial, but not unpleasant to the little patients.

TWELVE CASES OF OPERATIONS FOR URETHRAL STRICTURE IN WHICH COCAINE WAS USED TO ANÆSTHETIZE THE URETHRA.

BY H. V. HULL, M.D., SCHENECTADY.
Albany Medical College, 1874.

[FOR ALBANY MEDICAL ANNALS.]

Since the latter part of October, 1884, the writer has tried the effects of cocaine upon the urethral mucous membrane while doing internal urethrotomy. A four-per-cent. solution was usually applied to the canal some fifteen or twenty minutes previous to an operation, and its effects lasted for about half an hour. The mode of application was as follows:

In case the anterior two and a half inches only were to be involved, a Bosworth's fenestrated nasal speculum was introduced the distance required and the solution dropped into the urethra dilated by the blades of the speculum. After the fluid had remained in contact with the lower portion of the separated walls of the urethra for three or four minutes, the speculum was drawn out for about three-quarters of an inch, and the urethra behind the speculum was pressed together between the fingers of the operator so as to cause the fluid to follow the speculum and to act upon a higher part of the canal for the same length of time. In this same manner cocaine came in contact with all parts of the urethra which were to be operated upon. For deeper portions of the canal an Otis endoscopic tube (five inches long) was introduced, and after its obturator had been removed the cocaine was dropped through this tube, and by the method spoken of the solution acted upon each part of the urethra as the tube was slowly withdrawn. But in such cases the fluid was retained for a somewhat longer time in contact with the membrane than where the manipulations were confined to the anterior urethra. In a few cases where urethrotomy was done upon portions below the point reached by the endoscopic tube, there was used in its place a common red English gum catheter of as large a size as the urethra would admit, with its distal end cut off and the edges of the aperture made smooth. On a few occasions the process of Dr. A. Blumenfield (*Deutsche Med. Wochenschrift*, Dec. 11, 1884) was made use of, viz., to inject thirty to forty-five drops of a two-per-cent. solution with a small syringe, retaining the fluid by pressure with the fingers for three or four minutes. But the mode previously described has seemed preferable.

CASE I.—T. O'M., age 19 years; gonorrhœa one year ago; one stricture at meatus, size No. 22, Fr. Normal calibre of urethra, 34 Fr. Condition at date of operation: Gleet, persisting in spite of injections persevered with during many months. Two operations. Re-contraction after first to No. 30 Fr. Second operation done under cocaine. Result: A cure of the gleet up to the present time.

The patient experienced no pain during the second operation, though it required a much longer time to complete than the first, for the reason that a probe-pointed bistoury was used to cut the re-contracted fibres of the stricture, and it was necessary to proceed with extreme care in their division, so as to avoid the production of an artificial hypospadiasis.

This case the writer regards of some value as showing a comparison between two nearly identical operations performed on the same person, one done without the use of cocaine, while in the other it was used. Also, the second operation, if done without the anæsthetic, would naturally have been more painful than the first, for the reasons that while at first a meatotome was used, requiring but an instant of time, causing but a single dart of pain, the second operation was done with a bistoury, and required successive incisions and much more time.

Case II.—DeW. M., age 24 years; gonorrhœa two and a half years since; three strictures; first at meatus, size 24 Fr.; second at one and a quarter inches, size 29 Fr.; third at two and a quarter inches, size 32 Fr. Normal urethral calibre, 35 Fr. Condition at first operation: Slight but persisting gleet; frequent calls to urinate; pains in the testes and penis. Recontraction after first operation. Second operation under influence of cocaine. Complained of no pain during second operation, which was done with Otis' dilating urethrotome. Result: A complete cure of all his symptoms.

Case III.—M. R., age 32 years; three attacks of gonorrhœa, occurring eight, six and a half, and one and a half years ago; five strictures; one at meatus, size 30 Fr.; second at two and a half inches, size 28 Fr.; third at three and a quarter inches, size 17 Fr.; fourth at four inches, size 13 Fr.; fifth at six inches, size 28 Fr. Normal urethral calibre, 32 Fr. Condition at operation: Persisting gleety sometimes muco-purulent, discharges; frequent pains at scroto-penal junction. Three operations; third performed under cocaine.

At first operation the close strictures were divided with a Maisonneuve urethrotome. There was severe hemorrhage, which was controlled by bandaging the penis over a hard-rubber endoscope tube. Strictures re-contracted after the two first operations, and at time of third were found re-contracted in three places; the greatest point of narrowing was of the size of No. 21 Fr. Otis' dilating urethrotome used. Pain was experienced, though not as much as during the first operation. Very little hemorrhage, beyond a slight oozing. Result: Relief of discharges, remaining up to present time. Urethra admits freely a No. 32 Fr. sound.

Case IV.—P. McD., age 24 years; two attacks of gonorrhœa, the last seven months previous to operation; four strictures; first at meatus, size 18 Fr.; second at one-half inch, size 25 Fr.; third at two inches, size 30 Fr.; fourth at five and three-quarters inches, size 19 Fr. Normal calibre of urethra, 32 Fr. Condition at first operation: Gleet, persisting in spite of long-continued treatment by bougies. Has had two attacks of retention of urine. Three operations with the dilating urethrotome were done, all under cocaine. Patient complained of pain during every one. No severe hemorrhage at any time. Re-contraction of strictures after the two first operations, but since the third there has been no diminution of the urethral calibre and no reappearance of the gleet up to the present time.

Case V.—C. M., age 18 years; gonorrhœa eleven months before operation. A band of strictured tissue at one-half inch, extending about one-half inch back, size 28 Fr., at anterior part, gradually increasing to 31 Fr., and very dense. Normal urethral calibre, 34 Fr. Condition at operation: Gleety discharge, persisting in spite of the use of sounds by another physician. Operation done under cocaine with a probe-pointed bistoury. Utterly no pain experienced and no hemorrhage during the procedure. Result of operation: A complete cessation of discharge.

Regarding this case there is a point of special interest. The cocaine was used after the method already spoken of, and it was noticed that about ten minutes after the operation had been finished the patient complained of nausea and faintness. His forehead was covered with a profuse perspiration, face extremely pale, hands cold, skin covered with sweat. Pulse 64 and regular. Stimulants were given, and after half an hour's time had passed the patient regained his usual state of feeling. These symptoms were attributed to apprehension regarding the operation. But noticing in the *Medical Record*, January 17, 1885, an article entitled "Disagreeable Experiences with Cocaine," which records the experiences of several physicians with patients under the influence of the drug, it was seen that the symptoms occurring in the case just mentioned were identical with those recorded by Drs. Stevens, Peck, etc., as "disagreeable effects of cocaine."

Case VI.—J. H., age 26; gonorrhœa two and a half years ago; one stricture at meatus, size 24 Fr. Normal calibre of urethra, 28 Fr. Condition at operation: Gleety discharge since his attack of gonorrhœa. One operation, which was done under cocaine. Used bistoury, and made several incisions, deliberately dividing the strictured fibres. No pain experienced, though the passage of a steel sound afterwards was plainly felt as it glided over the urethra beyond that portion to which the anæsthetic had been applied. Result of operation: A complete cessation of the discharge.

Case VII.—S. J., age 30 years; two attacks of gonorrhœa, occurring five and four years since respectively; two strictures; first at meatus, size 19 Fr.; second at one-half inch, size 28 Fr. Normal urethral calibre, 30 Fr. Condition at operation: Chronic gleet, for which he had been treated with a variety of injections, but with only temporary relief to the discharge. Pains in penis, scrotum and insides of thighs. Involuntary seminal discharges and frequent calls to micturate. Three operations, all under cocaine. Re-contraction after the two first and return of discharge. No re-contraction after the last. No pain felt during the operations and no hemorrhage of consequence. Result: No return of gleet since last operation (done nearly two months since) and disappearance of pains and other symptoms up to the present time.

Case VIII.—B. A. V., age 20 years; four attacks of gonorrhœa, the last five months since; had also a chancroid seven months ago, which ulcerated into meatus, enlarging it to 36 Fr.; two strictures; first at three-fourths inch, size 25 Fr.; second at one and a half inches, size 30 Fr. Normal urethral calibre, 34 Fr. Condition at operation: Gleet, persisting in spite of the use of steel sounds and injections. One operation, under cocaine. Patient stated that he felt the stretching of the strictures just before the blade of the urethrotome was drawn through them, and also the burning sensation caused by the knife in its passage through the cicatricial tissue, though he declared that neither of these sensations could be called painful. Hemorrhage trifling. Result of treatment: A cure of discharge up to present date.

Case IX.—D. S., aged 34 years; gonorrhœa at three years and one and a half years ago respectively; one stricture at meatus, size 24 Fr. Normal urethral calibre, 35 Fr. Condition at operation. A gleety discharge. Two operations; first done without, second with, cocaine. First operation with meatotome. Re-contraction of stricture six weeks afterwards to size of No. 28 Fr. and reappearance of discharge. Second operation done with a probe-pointed bistoury, and re-contracted fibres carefully divided. Utterly no painful sensation during the second operation; hemorrhage trifling. In both of these particulars the difference was marked in favor of the last process, as the first use of the knife caused pain, and the hemorrhage which followed was considerable, and required to be restrained by compresses, held in place by elastic bands, during some five days afterwards. Result: A cure of the gleet, lasting to the present time.

Case X.—C. J., age 20 years. Never had an attack of specific urethritis. A masturbator between ages of 10 and 19 years. Penis curved to the left to the extent of nearly 30°. One stricture at meatus, size 22 Fr., extending backward nearly an inch in length, also a spasmodic stricture at membranous portion. Normal calibre of urethra, 30 Fr. Condition at operation: Profuse gleety discharge, at times muco-purulent. Frequent involuntary seminal discharges. Never had sexual intercourse. Previous to operating it was necessary to treat the extremely irritable urethra by the passage of steel sounds and astringent applications. An attack of orchitis occurred during the first few days of this preliminary treatment, caused, probably, by the irritation produced by the sounds. One operation; cocaine applied to entire extent of urethra. After the extensive contraction at meatus had been divided, a No. 30 steel sound passed easily by its own weight into the bladder, without even pausing at the membranous portion of urethra, at which point previous to the operation a No. 12 sound could only be introduced with difficulty. No pain felt during the whole procedure. Results of operation: A cessation of the gleet and disappearance of the spasmodic stricture up to present time. Seminal discharges also ceased later, after the use of general tonic remedies. Case still under treatment.

Case XI.—O. C., age 25 years; gonorrhœa two years since. A masturbator from age of 8 to 19 years. Two strictures; first at meatus, size 19 Fr., extending a quarter of an inch; second at two and three-quarters inches, size 26 Fr. Normal calibre of urethra, 31 Fr. Condition at operation: Gleet, frequent involuntary seminal emissions occurring during sleep; nervous and anæmic. Preliminary treatment by general tonics, and local means used for purpose of rendering urethra less sensitive. One operation; cocaine used. Urethrotomy with dilating urethrotome. Patient complained loudly of the pain caused, which seemed to be fully as great as if no anæsthetic had been used. However, it is reasonable to suppose that the cocaine did produce its effects upon the urethra, for the reason that there was no hemorrhage of consequence, either during the operation or afterwards. Patient had a chill, which was followed by urethral fever, caused by his carelessness in omitting to use the suppository containing quinine and morphia, which had been given him with instructions to insert it into his rectum half an hour before the operation. No return of gleet to present time. Seminal discharges still continue. Patient yet under treatment.

Case XII.—G. T., age 29 years; two attacks of gonorrhœa, the last eight months ago. One stricture at meatus, size 28 Fr. Normal urethral calibre, 32 Fr. Condition at operation: Gleet, pains in penis, in back and in testicles. Two operations, second with cocaine. Temporary relief of pains and gleet after first operation, but return of all the symptoms after two and a half months. At second operation a re-contraction of stricture was found, which was once more divided. No pain felt by patient. Result: The gleet and all the other symptoms before spoken of disappeared, and have not as yet returned.

To recapitulate: There were sixteen operations done upon the urethra under cocaine. In twelve instances the patients experienced no pain. In one case the patient distinctly felt the manipulations, but declared that they were not painful. In three cases the subjects operated on seemed to experience fully as great pain and to feel the stretching and the cutting as much as if no anæsthetic had been used. One patient experienced certain of the unpleasant constitutional effects of the cocaine. In none was there any hemorrhage of consequence either during the operation or subsequently.

Conclusions: *First.* Internal urethrotomy requiring comparatively shallow incisions may be performed about the anterior portions of the penile urethra, when cocaine has been applied to the parts, without the patient experiencing any pain whatever.

Second. In cases where such operations are executed in the deeper parts of the urethra, the patients generally feel as much pain as when the cocaine is not used. This fact may be owing to the circumstance that in those three cases reported above where urethrotomy was done in the deeper urethra the strictures divided were of smaller calibre than those operated on in the anterior portions of the canal, and for this reason required much deeper incisions than those before referred to, and these incisions involved structures below the mucous membrane.

Third. It would appear that cocaine has a very decided effect in restraining the hemorrhage, which often is so troublesome in operations upon the urethra, and that this effect is not only produced during and immediately after such operations, but it also persists for some days following. This was even observed in a marked manner in those three reported cases in which the cocaine did not relieve the pain of the operation; and it was in these three cases where severe hemorrhage might have been expected owing to the extent of the incisions made.

AN ENTEROLITH.*

BY R. H. SABIN, M.D., WEST TROY.
Albany Medical College, 1856.

On September 1, 1884, I was called to see Miss ———, aged 35 years, a maiden lady, who was pale, thin in flesh — almost a mere skeleton — and looked careworn and weary. She talked intelligently, said she was a great sufferer, that of late she had much pain in the rectum, that she had always been very costive, and years ago was twice operated upon for impaction of fæces, which operations consisted in breaking up the impacted mass and removing it. She believed that her condition now was the same as before the operations, but could not allow an examination without ether. An examination under ether disclosed a hard mass about as large as a turkey's egg; no impression could be made on it with my finger. I appointed a time for the operation that afternoon, procuring the assistance of my son, Dr. W. B. Sabin, who gave the ether, of which a very large amount was required to get her under its effects, one quart being used during the operation, which lasted an hour and ten minutes. The operation consisted in dilating the sphincter and crushing the stone with strong forceps and removing it in pieces. I attempted to remove it whole, but, on account of the brittle nature of the shell, it broke, which very much facilitated its removal. The whole that was saved weighed four and a half ounces; more than half an ounce crumbled and was lost. This mass on close examination is seen to consist of petrified fæces.

The patient stated that this mass had been forming from fifteen to seventeen years. It had never given her much trouble until within a few weeks past. She would often take laxative medicines, which would operate, but she never felt relieved.

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*Read before the Medical Society of the County of Albany, December 3, 1884.

During a practice of twenty-eight years I have met with five or six cases of hardened and impacted fæces, which required the use of the finger and scoop for removal, and twice have I found impaction of walnut shells in the rectum, which it was necessary to remove piece by piece, but never before have I seen petrifaction.

On searching for recorded cases, I find two, but those originated in foreign bodies lodged in the rectum, which served as nuclei around which the deposits formed. One case was where an insane patient swallowed a mass of hair, which lodged in the rectum and formed a hard mass, which was subsequently removed.

My patient was of peculiar constitution. When a child she fell forward from a chair with her hands spread out in front of her, and when taken up the skin peeled from both hands like a glove. Efforts were made to keep the fingers straight during their healing, but in vain; they contracted till the hands were tightly shut, and a skin formed over them just as a mitten is drawn over the shut hand, making complete stubs of them both. Her skin is so delicate that when her knee strikes a chair or other object either it discolors or the tissue breaks down. She has three sisters, two of whom are healthy looking women; the other partakes somewhat of this one's nature, having similar contracted hands, but not as badly. All of them are maiden ladies.

DISCUSSION.

Dr. **March** referred to articles which have lately appeared in medical journals in which it was claimed that so-called enteroliths were simply instances of impacted fæces.

Dr. W. N. **Hays**: I regard the specimen as a genuine stone. I see no reason why calculi should not form in other cavities of the body as well as in the kidneys and the urinary and gall bladders. The modern literature of enteroliths seems deficient. Flint regards these enteroliths as concretions of dry, hardened fæces. But the specimens shown do not appear like fæces. Older authors speak more fully. John Mason Good mentions cases of enteroliths in man and also in animals. He mentions one case of a stone ten and a half inches in circumference being extracted from the rectum of a woman who was pregnant at the time, and that her child, born a few weeks after, had an indentation on its head corresponding to the stone in the rectum. Three other children, born previously, had the same indentations on their heads. The woman had been suffering from the stone several years. Good gives another case where there were numerous stones passed, some of which were from four to six ounces in weight, and another where so many of these stones were in the intestines that the abdomen would rattle like a bag of marbles when pressed upon. He tells of stones found in the intestines of animals that weighed from fifteen to sixteen pounds and were eight or nine inches in diameter. He regards the stones as genuine calculi, composed of phosphate of magnesia and ammonia.

Dr. HAYS also exhibited a number of

PULMONARY CALCULI,

which with many similar stones were coughed up by a patient suffering from chronic laryngitis during a period of a year. Patient, a nurseryman in a hothouse, aged 48, of good habits and previous good health. was attacked with laryngitis about a year ago. His symptoms were very violent cough, hoarseness so that at times he could not speak above a whisper, a feeling of soreness in the larynx, diminished appetite, and loss of flesh. After a few weeks he commenced coughing up these stones in the most violent fits of coughing. After coughing up a few stones he would feel relieved for a time. These stones vary in size from that of a pin's head to that of a white bean. There was no history of consumption in his family, and I could detect no signs of tubercle in either lung. During the last six months his symptoms have been ameliorated some as regards cough and hoarseness, and he has gained twenty pounds in body weight. His treatment has been the use of a steam atomizer twice a day with tannic acid gas, five grains to an ounce; and internal treatment with stimulating expectorants and cod liver oil. These stones, I should judge, are composed mostly of carbonate of lime. They dissolve in muriatic acid with effervesence, and leave a mucous residue.

PATHOGENIC BACTERIA AND WANDERING CELLS.

BY THEOBALD SMITH, M.D., DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.
Albany Medical College, 1883.

[FOR ALBANY MEDICAL ANNALS.]

Since Cohnheim announced that the emigration of white corpuscles or leucocytes from the blood-capillaries was an essential part of the inflammatory process, these wandering elements of the blood have not suffered from want of attention. As early as 1878 Koch* mentions the occurrence of leucocytes, containing one or more bacilli, in a form of septicæmia produced in mice by the subcutaneous injection of small quantities of putrid blood and characterized by the presence of very delicate bacilli. The latter, he thinks, penetrate into the cells and multiply therein. In fact, some of the cells are completely filled with them, and as the former are gradually destroyed, roundish lumps of bacilli remain behind. In an earlier work* he found that a piece of the spleen of a mouse, which had died of anthrax, placed under the skin of a frog's back became enveloped in forty-eight hours with a gelatinous coating made up almost entirely of leucocytes which had gathered about the foreign body. Some of the cells contained coiled leptothrix forms of the *Bacillus anthracis* which, he supposed, had been taken into the cells as short rods, but which had grown within the cells, accommodating themselves to their limited quarters by assuming a coiled form. These cells finally burst and set the filaments free. He also observed that various putrefactive bacteria, when introduced beneath the skin, could be found, after a given time, within leucocytes at the place of injection. In his investigations of tuberculosis† he found that in the earlier stages of the disease the bacilli are invariably found in the protoplasm of the giant cells and occupying a position more or less antagonistic to the nuclei. The bacilli may continue multiplying until the containing cell is destroyed, or else the bacilli disappear, the giant cell remaining as an indication of the former presence of one or more bacilli. It has also been observed that these elements introduced into the circulation of rabbits are found in part within the white blood cells.

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* Wundinfectionskrankheiten, S. 44.

It seems that this excellent observer regarded the behavior of the cells towards bacteria as quite passive; the cell becomes frequently the vehicle by which the infective agent is carried from one part of the organism to another, and almost invariably perishes. "A wandering cell which has absorbed a tubercle bacillus does not assume thereby so harmless a burden as if it had swallowed a particle of cinnabar, carbon or other indifferent substance. Loaded with the latter, it may travel over a considerable distance, but under the deleterious influence of the bacillus, changes take place within the wandering cell which soon bring its movements to an end."‡

Metschnikoff, who has made a thorough study of wandering (mesoderm) cells in a number of invertebrates from a physiological as well as a morphological standpoint,§ has lately published a series of observations upon certain pathological processes which may serve to throw much light upon the numerous problems connected with the entrance of disease germs into the body and the manner of their destructive activity after having gained entrance. His conclusions differ materially from the conservative views of Koch as outlined above, and are based upon observations exceedingly interesting.

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* Beitrage z. Biol. d. Pflanzen II., 2 S. 300.

† Mittheilungen a. d. k. Gesundheitsamt I., S. 18.

‡ Loc. cit., p. 20.

§ Quart. Journ. Micr. Science (1884), p. 89.

In a recent article* he describes an epidemic of a hitherto unknown infectious disease among daphnia in an aquarium, produced by a micro-organism belonging to the *Saccharomycetes*, or yeast plants. Owing to the small size of the infected crustaceans and their comparatively simple organization, he was able to trace under the microscope the entire course of the disease. Within the alimentary canal into which the micro-organisms are introduced with the food they appear as slender, rod-like spores, each enveloped in an *ascus*, or sheath, which is soon removed by the digestive fluids. The spore penetrates into the body cavity through the intestinal walls, and there it is immediately surrounded by a number of leucocytes, or phagocytes, as Metschnikoff prefers to call all amœboid cells which are capable of absorbing and digesting solid food.† The protoplasm of these cells gradually envelopes the spore, several often being required to do this completely, and sometimes uniting for this purpose into a giant cell. The enclosed spore becomes irregular in outline, and finally breaks up into dark-brown or black granules. If the spores are present in too large numbers, some may escape destruction. They then begin to germinate and the disease breaks out. Conidia are formed by budding, which become detached and collect in largest numbers where the circulation is most sluggish. The conidia may be seized and destroyed in like manner by the phagocytes, provided the latter have not been disintegrated by the outnumbering spores. Of one hundred daphnia living in an infected aquarium for two months, only fourteen took the disease, while fifty-nine successfully combatted the spores which they had eaten.

The conclusions reached by the author from these observations are important and far-reaching. The most striking feature is the struggle between two kinds of organisms — the white corpuscles on the one hand, the micro-organisms on the other. The victory of the former implies a destruction of the infectious elements as they enter the tissues and the continued health of the individual, while the success of the latter implies rapid multiplication of the parasites, a withdrawal of the nutritious substances necessary to the vital activity of the cells and the secretion and dissemination of a substance (ptomaine) which acts as a chemical poison, resulting finally in the dissolution of the entire organism. This gathering of leucocytes by which the intruders are kept at bay must be regarded as a typical inflammation. It is, moreover, a physiological process, a reaction of the organism, designed to act destructively upon foreign irritant substances, mainly bacteria. Thus the views of other pathologists that inflammation is a conservative reaction receives additional support from direct observation. Guided by his previous studies, Metschnikoff concludes that inflammation is merely a certain kind of intra-cellular digestion as observed among invertebrates, the object consumed being in this case the bacteria themselves. In the daphnia this inflammatory gathering of leucocytes was also observed wherever a wound of the body surface permitted substances to enter. A protecting wall of cells guarded the break until a new growth of epidermis filled it up.

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* Archiv. f. path. Anatomie, etc. (1884), XCVI., S. 177.

† The term "phagocytes" as used hereafter will, therefore, be synonymous with the terms "wandering cells," "colorless blood corpuscles," etc., as the leucocytes are variously denominated.

The great importance of confirming in the mammalia the struggle between wandering cells and bacteria induced him to prepare a series of more difficult experiments.* In deciding upon anthrax as the experimental disease he chose, perhaps, the simplest of contagious animal diseases — one easily produced by inoculation in a number of small mammals and rapidly passing to a fatal termination; and in choosing this bacillar disease in which the micro-organisms are comparatively large rods which fill the entire capillary portion of the vascular system, he avoided any confusion which might arise as to the identity of the infectious agent. Micrococci might be confounded with intra-cellular granules, but with rod-shaped bodies this is not likely to occur. He repeated Koch's experiment by taking portions of organs from animals that had died of anthrax and placing them under the skin of frogs in the dorsal region. After two days they were found covered with a gelatinous envelope consisting almost entirely of leucocytes. Even from twelve to fifteen hours after inoculation bacilli were found in the interior of the leucocytes. To demonstrate in another way that the

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* Archiv. f. path. Anatomie, etc., XCVII. (1884), p. 502.

bacilli were actually taken into the leucocytes, some frog's lymph was mixed on a slide with bacilli from a culture in bouillon. Under the microscope the lymph cells were seen to envelop the bacilli, several being required to completely surround a filament consisting of several segments, although they did not unite into giant cells for this purpose. Bacilli thus acted upon by the lymph cells for from three to five days proved no longer virulent when introduced into susceptible animals. The frogs thus experimented upon did not contract the disease, but when kept at 38° C., most of them died in a few days, some from anthrax, others from the effects of the high temperature. These results, however, had already been obtained by P. Gibier in 1882.

Space does not permit me to follow several other ingenious experiments with the virus of anthrax upon lizards, turtles and mammals. The inferences to be drawn therefrom are that in insusceptible animals, such as turtles, lizards and frogs, at the ordinary temperature, the bacilli introduced into the organism are soon swallowed by leucocytes and digested, while in susceptible animals this happens rarely, if at all, though the blood vascular system, in which the bacilli develop and multiply, contains a larger number of white corpuscles than in health. They are, for some reason, unable to cope with the active bacillar growth.

If, then, the inflammatory reaction or the gathering of leucocytes about micro-organisms introduced by accident or design into the system is nature's mode of preventing their invasion, how can the varying susceptibility of man and animals to infectious diseases be explained? The smallest conceivable quantity of septicæmic virus which will kill animals of a certain species often fails when introduced in large quantity into animals of a closely related species. Metschnikoff explains the insusceptibility of cold-blooded animals by assuming that at the temperature of the mammalian blood the anthrax bacillus excretes a fluid which acts toxically upon the leucocytes. At the temperature of cold-blooded animals this secreting function is suspended, and the bacillus becomes an easy prey to the leucocytes. In short, the bacillus of anthrax has adapted itself to the temperature and organization of mammals, and under the conditions there presented unfolds its greatest virulence.

It would be premature to explain all animal insusceptibility by this victory of cells over micro-organisms. There are probably other conditions varying with each species of animal and each pathogenic micro-organism which may depend on differences not yet appreciated by the physiological and chemical tests of the present. That such modifying circumstances do play an important part becomes a strong probability when the pathology of different diseases is considered. The bacillus of anthrax fills the blood capillaries of the system, that of tuberculosis is found almost invariably at first within giant cells of tubercular nodules. The micrococci of erysipelas invade the lymph channels of the skin, those of swine plague produce extensive ulceration of the large intestine. Each pathogenic bacterium seems to have adapted itself not only to struggle with the wandering cells, but also to grow in certain localities, and in those only. Any slight histological or chemical variation in the nature of that locality may check multiplication. I need simply to recall in this connection the larger animal parasites, or entozoa, which offer peculiarities strikingly analogous.

Metschnikoff also reached some interesting conclusions by experimenting with virus of anthrax attenuated by heat according to Chanveau. One ear of a rabbit was inoculated with material from an attenuated culture, the other with bacilli not attenuated. When examined the following day, the exudate from the site of inoculation with the virus not attenuated was chiefly serous, containing a number of free bacilli. The exudate from the other ear was pus-like, many of the cells containing bacilli. The attenuation seems to have reduced the vitality of the bacilli to such a degree that the leucocytes were able to absorb and digest them before they could escape into the blood current. Vaccination, according to Metschnikoff, confers immunity by bringing the cellular elements of the body into a state in which they will successfully combat the most virulent material. The phagocytes must be gradually accustomed to the absorption and digestion of elements originally objectionable. This theory would thus explain the successive use of two vaccines of increasing strength and the acquisition of immunity only after the lapse of a certain number of days.

These investigations will undoubtedly throw much light upon the pathology of contagious diseases, provided they are not used as the basis of extensive generalizations. They have been made on two diseases only, and their value in the interpretation of other diseases must be to guide and not to govern research.

The subject of bacteria in their relation to disease has suffered more or less in the past from premature conclusions, though demanding the utmost patience and restraint. Some of the best observers, such as Koch and Miquel, have pointed out the short life of favored theories which must often be reconstructed from day to day. The intimate relation between general biology and pathology is also well illustrated in these researches. Metschnikoff was led step by step from purely biological observations on the lowest metazoa into these interesting and suggestive experiments, from the process of intra-cellular digestion among sponges to the inflammatory process in the higher vertebrates. In fact, he regards one as merely a special form of the other. The amœba slowly flowing around its food particle is the prototype of the amœbiform leucocyte enveloping the death-bringing parasite.

ABSTRACTA.

Tubal Pregnancy.—" Hun relates a case which occurred in the practice of Dr. W. L. Purple, of Albany. The patient, aged thirty-six, had given birth to seven children, of whom the youngest was thirteen months old, and was not yet weaned. She had menstruated, for the first time since the birth of her child, about six days before her illness began, the flow continuing for three days. She was suddenly seized with great pain in the right inguinal region. Pregnancy was not suspected. On the following day she was in a condition of extreme collapse, and died in the afternoon. At the autopsy, a quart or more of blood, partly fluid, was found in the pelvis and in the lower part of the abdominal cavity. At the middle of the right Fallopian tube was an ovoid swelling, two inches long by one broad. On its posterior surface was a small rent, one-fifth of an inch long, through which the blood had escaped, and from which a small cyst protruded. In the center of the cyst was floating a small embryo, measuring, in its coiled-up position, a little less than three-eighths of an inch. Judging from its length and from the development of its organs, its age was from twenty-five to twenty-eight days, a month or two under the time at which rupture of the tube usually takes place.

The left Fallopian tube was normal. The left ovary presented on its surface several linear scars; and on section, a corpus luteum was found, one-half by three-fourths of an inch in diameter. Nothing like a corpus luteum of pregnancy was found in the right ovary. The uterus was of normal size, and contained no traces of decidua beyond a doubtful fragment near the internal os."—*The Medical Chronicle,* Manchester, Eng.

Acid Mannate is an elegant, painless cathartic. It acts admirably as a cathartic in pregnant women. It is better than castor oil for children, being safe and pleasant.

Syphilitic Neuralgia.—The woman suffered from syphilitic neuralgia. It took one grain twice daily of morphine hypodermically to relieve her pain. Opium in the various forms that I tried caused constipation, in such large doses. I was afraid that she would become accustomed to morphia, so I determined to give Papine a trial. I found that it did not constipate the bowels, and that it was preferable to the ordinary preparations of opium in many respects.—*Dr. J. H. De Wolf, Baltimore, Md.*

Cocaine in Urethral Surgery.—*To the Editor of the Medical News:* Sir—I send you the following cases from my note-book, with the hope that they may elicit the experience of others in the same direction:

Seminal Weakness. November 25, 1884. Being desirous of faradizing the urethra of W. G., I found the introduction of the urethral electrode prevented by extreme sensitiveness of the mucous membrane. Having the day before secured a two-per-cent. solution of the hydrochlorate of cocaine, ʒ ss was slowly injected and retained for a few minutes, labile pressure upon the under surface of the penis being made to distribute the solution. The electrode was then introduced, and passed without pain into the bladder. Having been withdrawn to the desired point, the operation was proceeded with without further trouble.

Spasm of the Sphincter Vesicæ. F. R. W., November 30, 1884. Introduction of the urethral electrode for faradization of the muscle was rendered impossible, as the sensitiveness of the mucous membrane just inside the meatus caused the patient intense suffering when such manipulation was attempted. The injection of a two-per-cent. solution of cocaine relieved the condition in five minutes. This patient has been seen by me several times for the same trouble, and I have heretofore relieved the sensitiveness of the urethra by the injection of a weak solution of carbolic acid in glycerine.

Chronic Cystitis. C. A. R., December 20, 1884. Patient has been under observation several months, and all attempts to treat the case by internal applications of galvanism have been unavailing, on account of the pain attendant upon the introduction of the urethral electrode. To-day I employed ʒ ss of a two-per-cent. solution of hydrochlorate of cocaine; and there being no amelioration of the sensitive condition at the end of fifteen minutes, I injected the same amount of a four-per-cent. solution, which I obtained by evaporating a two-per-cent. solution over a sand bath. This produced the desired effect in a very few minutes.

Stricture of large calibre in the spongy portion. H. S., January 5, 1885. Whole urethral tract very sensitive. Injection of ʒ ss of a two-per-cent. solution of muriate of cocaine removed the hyperæthesia from the greater part of the urethra, but produced no amelioration at the seat of stricture. Another injection of the same solution, located as well as possible with a long-nozzle syringe at the strictured portion, failed to relieve the difficulty. The next day ʒ ss of a two-per-cent. solution was injected to allay the general hyperæsthesia, followed immediately by the application of a four-per-cent. solution in glycerine to the seat of the stricture by means of a canula and sponge. No relief of the sensitiveness was obtained, but the patient became extremely pale, remarked that it was growing dark, perspiration stood upon his face and hands, and in a moment more he had ejected the partially digested contents of his stomach upon the floor. He soon recovered, and felt no further disturbance.

The above cases are of interest as examples of the value of cocaine in urethral instrumentation, and the last one indicates a field of investigation as to the depth to, and the tissues upon, which the alkaloid acts. The not serious, but decidedly unpleasant, symptoms in the last case are mentioned, not that cocaine necessarily bears a causal relation to them, but that they may be remembered as having occurred in conjunction with the application of a four-per-cent. glycerole following a two-per-cent. solution. I have not determined the existence of an ulcer at the seat of stricture, which might account for the symptoms, and I have not developed them at subsequent operations, at which times I have not applied the cocaine so freely.—*Ezra A. Bartlett, M.D.*, 83 *Hawk street, Albany, in Medical News*, Jan. 31.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:
F. C. CURTIS, M.D., A. VAN DER VEER, M.D., LORENZO HALE, M.D.,
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. FEBRUARY, 1885. NO. 2.

——THE *American Medical Digest*, January, 1885, page 1, under heading "Surgery," reprints from THE MEDICAL ANNALS, December, 1885, "Case of Over-extension for Fracture of the Femur," by Dr. W. A. Merritt, of Cherry Valley, N. Y. We acknowledge the compliment from the editors of the *Digest*, indicated by their selecting the opening article for their new volume from the pages of THE MEDICAL ANNALS.

——THE *Physicians' and Surgeons' Investigator*, Buffalo, January, 1885, copies the account of the first one of the operations of Mr. Lawson Tait in Albany, from the report of lectures and operations given by Dr. Van der Veer and Dr. Boyd in the ALBANY MEDICAL ANNALS, January.

——THE *New England Medical Monthly*, Sandy Hook, Conn., February, 1885, abstracts from THE MEDICAL ANNALS, February, 1884, page 41, discussion by Dr. Maurice J. Lewi on Delirium Tremens.

——"IN the ALBANY MEDICAL ANNALS for January, Dr. T. F. C. Van Allen recommends a triturate of cocaine muriate. He says that a four-per-cent. triturate with pulverized gum acacia will adhere to the surface of the conjunctiva, and not be squeezed out nor as readily washed away as an aqueous solution; also, that its action will be more permanent, although it takes longer time for absorption.

"[We suggest that this would be an elegant form for exhibition of the drug in the larynx or the nose. Especially does it seem to be the preparation indicated in the nose during an acute catarrh or in hay fever.—ED.]"—*Louisville Medical News.*

BOOKS, ETC.

A HAND-BOOK OF SKIN DISEASES. By Arthur Van Harlingen, M.D. 12mo, 286 pp., cloth, $1.75. P. Blakiston, Son & Co.

There is surely no dearth of books on dermatology, and very few of them are poor ones, which is an exceptional feature, for there are plenty of volumes coming out in all the rising specialties, but not all are good.

The attempt has been made by our author to put in compact form, and under an arrangement to facilitate ready reference, the subject of skin diseases. It is just the plan that was pursued by Tilbury Fox in his "Epitome of Skin Diseases." Condensing a subject is not always attended with success. In fact, it needs a very clear mind to apprehend just what is the best part of a subject for the desired purpose and to omit all else. Dr. Van Harlingen has certainly succeeded admirably. He has confined himself to the practical matter of diagnosis and treatment. It is especially rich and suggestive in the latter. Especial attention is also given to common diseases. In compact but legible type, it is really a very complete and compendious presentation of modern dermatology. It is arranged alphabetically, but a good thing has been done in paying due deference to classification, by putting a numeral after each heading to show to which class it belongs. A serious fault, however, is the lack of a proper index, without which no one ought to be allowed to print a book.

Dr. Van Harlingen is professor of diseases of the skin at the Philadelphia polyclinic, and is one of the most respected contributors to the literature of this subject, so that he is a trustworthy authority. He has withal shown much tact in selection and arrangement, and has presented a volume not only valuable as a hand-book to students, but also for ready reference by practicing physicians. It is a real pleasure to find a book so worthy of commendation. F. C. CURTIS.

CHRONIC NASAL CATARRH: Three Clinical Lectures at College of Physicians and Surgeons, New York, by G. M. Lefferts, M.D. Reprint from *Medical News* and from *American Clinical Lectures*. Published by Lambert & Co., St. Louis. 48 pages, profusely illustrated, $1.00.

This practical 16mo is published in the same form and style as the popular "Quiz Compends." The three lectures are on Examination, Diagnosis and Treatment of Nasal Catarrh.

Douches are disapproved and the use of all solutions containing sodium chloride. The author prefers coarse sprays of diluted Listerine, either from two to ten parts of warm water to one part of Listerine, or ℞ Sodii bicarb. ʒ ss, Sodii biborat. ʒ ss, Listerine, ℥ j, Aquæ, ad ℥ iv. M.

The Country Gentleman, published here in Albany, is probably without a rival as a practical paper for those interested in agricultural and horticultural pursuits. It is particularly noticeable that it is principally filled with contributions from the most intelligent farmers and gardeners, on practical subjects. The paper is made up of experiences rather than theories. A noticeable feature is the frequent appearance of notes of observation on the new western and southern farming regions. A very interesting series of papers on Florida farming and gardening is in progress. Plans for buildings, grounds and farm structures are frequently seen. Veterinary subjects are regularly treated, and there is a weekly record of general news. The journal is now in its fifty-fifth year of issue, and sends to its subscribers every week twenty large folio pages of valuable reading. There is no periodical which fills more fully the purpose for which it is intended. F. C. C.

Foreign Exchanges.—*The Edinburgh Clinical and Pathological Journal.* Editors, J. Graham Brown, M.D., F.R.C.P.E., F.R.S.E.—in Medicine; Charles W. Cathcart, M.A., M.B., F.R.C.S. Edin. and Eng.—in Surgery; and D. Berry Hart, M.D., F.R.C.P.E.—in Obstetrics and Gynecology. 16 octavo pages, weekly. Sixpence a number. Published by Bell & Bradfute, 12 Bank street, Edinburgh..... *The British and Colonial Druggist*, 42 pp. folio, monthly, 7s. 6d. per year, payable to J. F. Cantwell, 28 Paternoster Row, London, E. C. Students' Department, conducted by A. J. Hailes, F.C.S..... *The Medical Chronicle*, Manchester, Eng. (88 pp., octavo); A Monthly Record of the Progress of the Medical Sciences. Edited by James Nivens, M.A., M.B., Cantab., Fellow of Queen's College, Cambridge, and W. J. Sinclair, M.A., M.D., Aberd.; and published under direction of the following committee: J. Thorburn, M.R.C.P., Charles J. Cullingworth, M.R.C.P., Julius Dreschfeld, F.R.C.P., James Hardie, F.R.C.S., Thomas Jones, F.R.C.S., D. J. Leech, F.R.C.P., David Little, M.D., D. Loyd Roberts, F.R.S.E., James Ross, F.R.C.P.

MEDICAL NEWS.

ALBANY MEDICAL COLLEGE, ALUMNI DAY.

President H. T. Hanks, M.D. ('61), New York, will, at the close of his address, receive the class of '85 into membership in the Association of the Alumni of the Albany Medical College.

The Faculty address of welcome to Alumni will be given by Prof. J. P. Boyd, of the Albany Medical College, at 10 o'clock in the forenoon, Wednesday, March 4, at Alumni Hall.

Prof. John Ordronaux, M.D., LL.D., of New York, has consented to address the graduating class, at the Commencement exercises at 3 P. M., in Leland Opera House.

The Alumni Lectures by Prof. William H. Thomson ('59), on "The Germ Theory of Disease," will be given as announced in our January number.

ALBANY COLLEGE OF PHARMACY.

The Commencement will be held in Geological Hall, Monday, March 2, 1885, at 8 P. M. The Address will be given by Counselor Charles J. Buchanan. Class dinner at the Delavan after the commencement exercises.

MEDICAL SOCIETY OF THE STATE OF NEW YORK—OFFICERS FOR THE ENSUING YEAR.

President—Dr. A. Van der Veer, of Albany.
Vice-President—Dr. A. C. Post, of New York.
Secretary—Dr. W. M. Smith, of Syracuse.
Treasurer—Dr. C. H. Porter, of Albany.

Censors—Southern District, Dr. F. A. Castle, Dr. G. H. Fox, and Dr. David Webster, of New York. Eastern District, Dr. Joseph Lewi and Dr. N. L. Snow, of Albany, and Dr. LeRoy McLean, of Troy. Middle District, Dr. A. Churchill, of Utica, Dr. L. Griffin, of Binghamton, and Dr. R. Frazier, of Camden. Western District, Dr. T. Dimon, of Auburn, Dr. M. G. Kittenger, of Lockport, and Dr. D. Little, of Rochester; for the College of Medicine, Syracuse University, Dr. I. N. Goff, of Cazenovia.

Committee of Arrangements—Dr. S. B. Ward, of Albany; Dr. W. S. Ely, of Rochester; Dr. E. L. Partridge, of New York.

Committee on By-Laws—Dr. W. C. Wey, of Elmira; Dr. G. H. Piffard, of New York; Dr. W. M. Smith of Syracuse.

Committee on Hygiene—Dr. E. V. Stoddard, of Rochester; Dr. F. C. Curtis, of Albany; Dr. A. N. Bell, of Brooklyn; Dr. J. Fisher, of Sing Sing; Dr. E. Hutchinson, of Utica; Dr. W. H. Bailey, of Albany; Dr. J. P. Creveling, of Auburn.

Committee on Legislation—Dr. D. Lewis, of New York; Dr. S. B. Ward, of Albany; Dr. F. R. S. Drake, of New York.

Committee on Ethics—Dr. A. Jacobi, of New York; Dr. A. Matthewson, of Brooklyn; Dr. J. W. Whitbeck, of Rochester.

Committee on Prize Essays—Dr. W. W. Potter, of Buffalo; Dr. W. S. Ely, of Rochester; Dr. H. R. Hopkins, of Buffalo.

Committe on Publication—Dr. W. M. Smith, of Syracuse; Dr. C. H. Porter, of Albany; Dr. A. Mercer, of Syracuse.

STATE MEDICAL EXAMINERS BILL.

The seventy-ninth annual meeting of the Medical Society of the State of New York, held in Albany on the first Tuesday, Wednesday and Thursday of this month, was a successful session, not only as regards papers and discussions, but preeminently so because of the *unanimous* action in agreeing upon the construction of a bill to be presented to the legislature on the matter of a State Board of Medical Examiners.

By this bill there is to be but one board, to consist of nine members named annually by the Board of Regents; three shall be members of this state society, but not connected with colleges; three shall be members of this society, and shall be connected also with colleges; and three shall not be members of this state society, but shall represent the other incorporated state societies in proportion to their membership. After the results of examinations on anatomy, physiology, histology, chemistry, pathology, therapeutics, hygiene, surgery and obstetrics have been recorded, then three sets of questions—prepared respectively by representatives of the Medical Society of the State of New York, the Homœopathic Medical Society of the State of New York, and the Eclectic Medical Society of the State of New York—shall be given to each applicant, and the applicant shall elect which one of said sets of questions he or she shall answer.

It is believed that this bill will pass the legislature, and meet with favor from the general public.

MEDICAL SOCIETY COUNTY OF SCHENECTADY.

At the annual meeting, on the second Tuesday of January (13th), 1885, after papers on surgical topics had been read by

Dr. George F. McDonald, and by Dr. L. T. Vedder ('81), the president, Dr. H. C. Van Zandt ('65), delivered an address, presenting the objects and needs of the society. As an endorsement of the president's address the society unanimously resolved to hold quarterly, instead of semi-annual, meetings, at the court house, the meeting to be at the call of the president.

PERSONALS.

—The Medical Society of this State yesterday paid a handsome compliment to one of its ablest and most skillful members when it elected Dr. Albert Van der Veer, of this city, to the position of president of the organization. Dr. Van der Veer is a representative and distinguished man in his profession, and deserves the recognition from his associates which his election gives.—*Editorial in Albany Journal*, Feb. 6.

—Dr. Charles H. Crawford ('81), of Albany, and Miss Hattie L. Coleman, also of Albany, were married by the Rev. Dr. Eaton, at the residence of H. R. Watson, No. 101 Grand street, Wednesday evening January 21, 1885. The couple have taken up residence on Hudson avenue.

—Dr. F. B. Sutliff ('78), son of Mr. T. M. Sutliff, of Bath-on-the-Hudson, N. Y., has received an appointment from the king, at Willihaque, Sandwich Islands, where he is located, at a salary of $2,000 per annum, in addition to his income from a lucrative practice.

—Dr. Abram Groesbeck ('49) died in Chicago, November 25, 1884. He was born in Albany, N. Y., May 24, 1810. He was licensed by the Medical Society of the State of New York in 1831. He became a member of the Albany County Society in the same year, and was a censor in 1836, and was secretary in 1837, '38 and '39. He graduated from the Albany Medical College in 1849, and settled in Chicago in 1856, where he attained eminence in his profession. A lengthy and entertaining biography is given in *The Chicago Medical Journal and Examiner*, January, 1885.

—H. Alsberg, Albany, N. Y., writes to the *Weekly Drug News* that he has an old bronze mortas which came from Germany, and is dated 1648. It was used for grinding spices.—*National Druggist.*

ALBANY
MEDICAL ANNALS:
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VOL. VI. MARCH, 1885. NO. 3.

DIFFERENTIAL DIAGNOSIS BETWEEN LOCOMOTOR ATAXIA AND SPASMODIC SPINAL PARALYSIS.*

BY HENRY HUN, M.D., ALBANY,
Lecturer on Nervous Diseases in the Albany Medical College.

The two gentlemen who have kindly consented to come here to-night, in order that we might study the disease with which each is afflicted, present one symptom in common—their manner of walking is awkward. It is not so much that they are weak—certainly they are neither of them as strong as they once were—but still they have strength enough to walk without any difficulty if they could only use their strength to advantage. The trouble is that they cannot properly combine together the different muscular contractions and relaxations necessary for walking and for other movements. This condition of things, where the muscular strength is only slightly or not at all impaired, but where the power of properly combining the various muscular contractions and relaxations necessary to any complicated movement is disturbed, is called ataxia, and may be due either to a disease of the cerebrum or cerebellum or spinal cord or peripheral nerves. Both these patients, you observe, are well marked examples of ataxia; their movements are not wanting in force, but they are awkward. It is true that the awkwardness of the walk in the two cases is very different, yet until the last ten years the two forms of disease were classed together under the general name of locomotor ataxia, and even at the present day the great majority of practitioners do not distinguish between the two forms. In 1875 Erb completely and accurately described this form of disease which this patient, Mr. A., has, under the name of spasmodic spinal paralysis, for the first time, although during the ten years previous Charcot had described and discussed several cases of the disease. Both Charcot and Erb considered the disease to be due to a sclerosis of the lateral columns, although they were very guarded in this opinion, because they could support it by no satisfactory autopsy. During the last ten years a great many cases of this disease have been reported, and much has been written about it. The other patient, Mr. B., is a typical case of locomotor ataxia.

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*Read before the Medical Society of the County of Albany, January 14, 1885.

Now let us commence the study of the differential diagnosis of the two forms of disease, by a consideration of the most important diagnostic symptom. When I strike the ligamentum patellæ of Mr. A., who has his legs crossed the one over the other, you see that immediately the quadriceps extensor femoris muscle contracts, and the leg is thrown sharply forwards. You are all familiar with this phenomenon, which in a greater or less degree, is present in every healthy man, but in the case of Mr. A., who is suffering from spasmodic paralysis, this knee jerk, or knee phenomenon, or patellar reflex, as it is variously called, is greatly increased, and each tap causes several vibrations of the leg; while in the case of Mr. B., who is suffering from locomotor ataxia, the hardest tap produces no movement—there is absence of the knee jerk, or the patellar reflex. In 1875 Westphal and Erb, independently of each other, described this knee jerk, and Westphal pointed out that it was invariably absent in locomotor ataxia, and expressed doubt as to its being a true reflex action, while Erb considered that it was a reflex action. Since that time this phenomenon has been much studied. It is found to be invariably present in the condition of health, and it is almost universally regarded as a reflex action.

In every reflex action we must have an arc formed by a sensitive nerve, a motor nerve, and a portion of the spinal cord connecting the two. In the case of this tendon reflex, we have the arc formed by the sensitive nerve of the quadriceps extensor femoris muscle, by a portion of the lumbar enlargement of the spinal cord, and by the motor nerve supplied to the quadriceps extensor femoris muscle. The sensitive and motor fibres forming this arc, of course, run in the anterior crural nerve. In regard to the channels by which the irritation passes across the spinal cord, there is this to be said. From the anatomy and physiology of the spinal cord, we know that in the lumbar enlargement the posterior nerve roots, which contain all the sensitive nerve fibres from the legs, run forwards in part in the posterior horns and in part in the adjacent parts of the posterior columns, as you see in Fig. 1, and that in a general way we may say that the nerves from the skin run in the posterior horns, while the nerves from the muscles and tendons run in the posterior columns, or rather in the external portion of the posterior columns, which is commonly called the column of Burdach. Hence the nervous impulses producing the cutaneous or the superficial reflex actions, such as we get by irritating the skin, pass along channels in the posterior horns, while the tendon or deep reflex actions, as they are called, such as the patellar reflex, take place along channels running in the external portion of the posterior columns, or the columns of Burdach; the internal portion of the posterior columns being called the columns of Goll. The whole process in a healthy man is, then, as follows: When the ligamentum patellæ is suddenly struck and driven inwards, the quadriceps extensor femoris muscle is necessarily suddenly, though slightly, stretched, and this sudden stretching irritates the terminations of the sensitive fibres supplied to the muscle. This irritation passes along these sensitive fibres in the anterior crural nerve, enters the spinal cord by the posterior nerve roots of the lumbar enlargement, and passes forwards across the columns of Burdach to the nerve cells in the anterior horns, and out of the cord by the anterior nerve roots, and then runs along the motor fibres in the anterior crural nerve to the quadriceps extensor femoris muscle, and causes it to contract, and the leg is thrown forwards.

In our case of locomotor ataxia this reflex action does not take place, and therefore we know that the reflex arc must be broken at some part of its course. Now, this reflex arc can be broken either by disease of the anterior crural nerve, which contains the sensitive and motor fibres from the muscle, or it may be broken by disease of that portion of the spinal cord which connects the sensitive and motor fibres. We can at once exclude any disease of the anterior crural nerve—first, because as the patellar reflex is absent in both legs the anterior crural nerve must be diseased in both legs, which would be very unusual; and, second, and more important, because if the anterior crural nerve were so diseased that it could not transmit impulses for reflex movements it could not any better transmit impulses for voluntary movements. We know, however, that the nerve can transmit impulses for voluntary movement, because the patient can contract his muscles whenever he wishes to by an effort of will, so that we feel sure that nervous impulses can be transmitted along the anterior crural nerve to the muscle—that is, the motor fibres of the anterior crural nerve are normal; and there is no cutaneous anæsthesia of the anterior and inner side of the thigh sufficient to lead to the conclusion that the sensitive fibres of the anterior crural nerve do not also convey nervous impulses. The break of the reflex arc, therefore, does not occur either in the sensitive or in the motor fibres of the anterior crural nerve, but must be in the spinal cord. Now, the fibres of this reflex arc pass through the upper part of the lumbar enlargement. They enter by the posterior roots, run through the white matter of the posterior columns, enter the gray matter and run to the nerve cells lying in the anterior horns, and thence pass out through the anterior roots and run to the muscles. The disease cannot be in the nerve cells in the anterior horns, because the impulses for voluntary movements pass through these cells, and we know that the voluntary movements still take place. The disease cannot be, either, in the gray matter, because the cutaneous reflexes which pass through it are not destroyed. The disease must therefore be in the external portion of the posterior columns—that is, in the column of Burdach—and destroys the reflex arc at the point marked 3′ in Fig. 1. In fact, in autopsies made in the early stages of locomotor ataxia the disease is found principally at this point, although the posterior horns are also to some extent involved, and later the columns of Goll, especially in the dorsal and cervical region, are affected, in consequence of an ascending secondary degeneration along the sensitive fibres which have been destroyed.

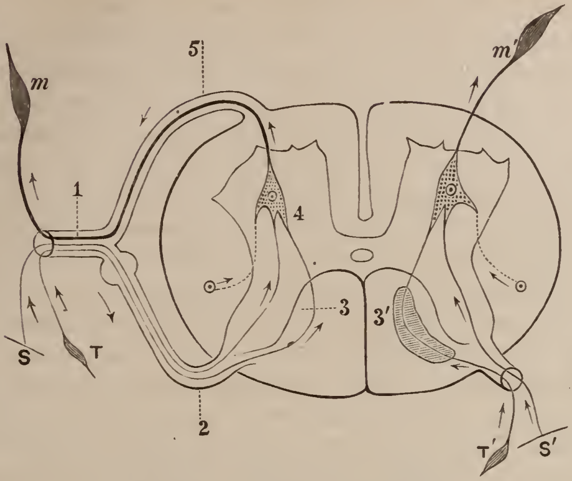

FIGURE 1.—(After Bramwell.)

Figure 1 is a schematic representation of a transverse section through the lumbar enlargement of the spinal cord. The left side represents the healthy spinal cord, while the right side represents the lesion of commencing locomotor ataxia. The various groups of nerve cells in the anterior horn are represented by one large cell (4), and through this cell must pass all the nervous impulses which produce either voluntary or reflex movements. This cell is connected at one end with the fibres of the anterior nerve roots (5) which run to the muscles (m), and along which pass the impulses which cause muscular contraction. At the other end the cell is connected with the sensitive fibres from the skin (S), muscles and tendons (T), which enter the spinal cord by the posterior nerve roots (2), and run forwards either through the gray matter of the posterior horns or through the adjacent part of the posterior columns (3)—that is, the column of Burdach. The same cell (this single cell, of course, represents all the nerve cells in the anterior horns) is also connected with fibres which are situated in the posterior part of the lateral columns which fibres come down from the cortex of the brain and transmit impulses for voluntary movement from the cerebral cortex to the nerve cells in the anterior horns and thence to the muscles. The anterior and posterior nerve roots unite just beyond the spinal ganglion to form the common nerve trunk, as is represented on the left side of the figure; while on the right side, for the sake of simplicity, the anterior nerve roots are represented as running directly to the muscles, and the posterior nerve roots as running directly to the sensitive surfaces. On the right hand side of the figure is represented the lesion of commencing locomotor ataxia (3′). The chronic inflammation, or sclerosis, commencing here destroys at this point the reflex arc which runs from the sensitive organs of the muscles and tendons (T) to the motor organs of the muscles (m), and hence irritation of the sensitive organs of the muscles and tendons no longer causes a reflex contraction of the muscular fibres, and hence the tendon reflexes are early abolished in cases of locomotor ataxia.

From the analysis that we have thus far made of the case we see that we have to do with a disease which destroys the sensitive fibres from the muscles immediately after they enter the spinal cord. Let us see what is the consequence of this. We know that in a healthy man when any muscle is suddenly stretched the muscle responds by a contraction, and this is of great practical importance. For instance, when we slip and are in danger of falling because our body is thrown suddenly backwards, this throwing backwards of the body suddenly stretches the quadriceps extensor femoris, the psoas, the iliacus, the abdominal and the other muscles on the anterior aspect of the body, and these muscles respond by a reflex contraction, which tends to throw the body forwards and to prevent it from falling. This is purely a reflex and not a voluntary act, and takes place before we have time to think about it. In the same way when we stand with our feet close together and our eyes shut, if we totter a little to one side or the other, the muscles on the opposite side are more or less suddenly stretched, and have a tendency to respond to this stretching by a reflex contraction and to pull the body back again. When we are thus standing, however, we totter so slightly and slowly that this reflex action is very slight. Much more important than it in preserving our equilibrium is the fact that in virtue of our muscular sense—that is, the information supplied to us by the sensitive fibres of the muscles—we feel that each muscle is contracted to the proper degree, and therefore we can stand with our eyes shut without any danger of falling.

When Mr. B. tries to stand with his eyes shut and his feet close together, he cannot tell whether his muscles are properly contracted or not—he has lost his muscular sense, because the sensitive nerve fibres from his muscles are destroyed just after they have entered the spinal cord; and when he totters a little to one side, the muscles of the opposite side which are stretched do not respond by a reflex contraction, and inasmuch as he is ignorant as to what condition of contraction his muscles are in, he cannot tell which muscle he needs to contract in order to preserve his equilibrium. Mr. B., therefore, cannot save himself from falling either by voluntary or by reflex action, and it is quite impossible for him to stand with his eyes shut and with his feet close together; when he attempts to do so he complains of feeling dizzy, and you see that he would fall if he were not caught and held up. When he has his eyes open he can see that he is going to fall and can save himself. His eyes supply him with the information which the nerves of muscular sense ought to supply him with. For the same reason he cannot walk in the dark or with his eyes shut, and when he walks in the light with his eyes open he keeps looking at his feet and guides them with his eyes. Even then his walk is very awkward, because he cannot tell in what condition of contraction his muscles are, and to make sure of himself he contracts all his muscles too strongly. He throws his leg much too far forwards, and then brings it back and down with a bang on the heel. Often the slight contraction of the abductors necessary to bring one leg in front of the other is exaggerated, and the leg shoots off to one side. When Mr. B. lies down and tries to execute any definite movements with his arms and legs, his eyes being shut, you see how imperfectly and awkwardly he performs them. All his movements are violent, because, not having any feeling of how strongly his muscles are contracted, he makes sure of the movement by contracting each muscle with all his force.

Hence, all these remarkable motor disturbances which the patient manifests in his walk and actions are not due to any affection of the muscles or motor nerves (for when he exerts himself to make any movement you see that it takes all my strength to resist him), but are due to the destruction of the sensitive nerve fibres of the muscles, so that proper information as to the condition of the muscles is not conveyed to the central organs to cause or regulate the production of either reflex or voluntary movements. On account of this loss of muscular sense the patient often loses his legs in bed—that is, he does not know in what position they are, although this last phenomenon implies also a certain amount of anæsthesia of the joints and skin. Moreover, I can move his legs very rapidly in all directions and no reflex resistance will be offered to my movements.

Mr. B. is an advanced case of the disease, and, if we examine him more closely, we will find other symptoms present besides his ataxia. Thus, we find small patches of anæsthesia scattered over the legs, which means that the process has extended to the sensitive nerve fibres in the posterior horns, and therefore the parts of the skin supplied by these fibres are anæsthetic. It must be remembered that these are sensitive fibres, and while they are being destroyed by the inflammation they give rise to sensations of great pain. Mr. B. will tell you that for years he has had at times extreme pain in his legs. Since not the whole nerve but only little filaments of it are successively attacked, and especially the filaments from the muscles, therefore the pain is not felt along the whole nerve, but in little patches not larger than an inch square, and these spots of pain do not seem to be in the skin so much as in the muscles and deeper tissues. These excruciating pains are felt at times not only in the legs, but also in the internal viscera, especially in the stomach or at the neck of the bladder. Mr. B. has had very severe pain at the neck of the bladder. When the inflammation attacks the nerve filaments less severely, in the intervals between the sharp pains tingling and creeping sensations are felt in the legs, and especially common is the sensation of a band tied tightly about the waist; all these being symptoms of irritation of the posterior horns. Another prominent sensory disturbance in advanced cases, such as Mr. B.'s, is the retardation of the conduction of tactile and painful impressions. You see that when I touch Mr. B.'s feet with the head of a pin there are certain places where he does not feel it at all—that is, there are patches of anæsthesia. On the places where he does feel the head of the pin he does not feel it until a fraction of a second after he has been touched—that is, there is a slight delay in the transmission of tactile impressions. He feels the sharp prick of a pin everywhere—that is, there is no analgesia; but he does not feel the pain of the prick until more than a second after the pin has actually pricked him—that is, there is a decided delay in the transmission of painful impressions. In consequence of this delay in the transmission of sensory impressions, the cutaneous reflex actions are also decidedly delayed, and do not take place until quite a little time has elapsed after the skin has been irritated.

Locomotor ataxia, then, is really a disease of the filaments of the sensory nerves in the posterior horns and in the columns of Burdach; and although in advanced cases the whole posterior part of the cord—that is, the columns of Goll, the columns of Burdach and the posterior horns—is involved, as you see from these microscopic slides, yet the degeneration of the columns of Goll is rather of the nature of a secondary degeneration. The disease is really situated in the filaments of the sensory nerves just after they enter the spinal cord, and the upward continuation of these fibres in the column of Goll degenerate, just as every nerve degenerates when it is destroyed at any part of its course. This degeneration ceases in the medulla oblongata, where the fibres of the column of Goll terminate in the nucleus of the column of Goll.

The disease is not limited to the spinal cord; the spinal nerves are almost always involved, and the cranial nerves are also very commonly affected. In especial, the great sensitive cranial nerve—the optic nerve—is frequently affected. In many cases of locomotor ataxia we find early in the disease an atrophy of the optic nerve. Finally, in this connection, a symptom should be mentioned which is found early in the disease, and which is of considerable diagnostic value; it is that the pupil does not respond to light, but does respond to efforts of accommodation. When we look at a distant object our pupils dilate, but when we look at a near object our pupils contract. When we look at a near object we also converge our eyes by the contraction of the internal recti muscles, and hence the contraction of the pupils and the contraction of the internal recti muscles become intimately associated, and in cases of locomotor ataxia where there is absolutely no contraction of the pupils to light the pupils will contract when the eyes converge to look at a near object and dilate when they look at a distant object.

The important symptoms, then, for the diagnosis of locomotor ataxia are, the reaction of the pupil to accommodation, but not to light; the absence of the tendon reflexes; the inability of the patient to stand with his feet close together and his eyes shut; the severe pains localized in small patches; later the patches of anæsthesia and the retardation of the conduction of pain. We have discussed these symptoms at some length, and have spoken of the changes in the central organs on which they depend.

Let us now consider the other case. Mr. A. is a case of spasmodic spinal paralysis, and in him we meet with a very different condition of things. The patellar reflex is not absent; on the contrary, it is increased, a slight tap on the ligamentum patellæ causing a number of oscillations of the leg. There is an exaggeration of the tendon reflexes—that is, whenever a muscle is suddenly stretched it responds by an abnormally strong contraction. When the patient lies down his leg can be moved slowly in every position without any resistance, but it is impossible to suddenly extend or flex the leg; when any attempt is made to move the leg quickly, the leg becomes as firm and unyielding as a bar of iron; and this is entirely a reflex action, for Mr. A. will tell you that he does not try to hold his leg at all. You see what a contrast this is to the patient with locomotor ataxia, whose leg could be moved freely and quickly in all directions. In the same way when I push Mr. A.'s foot up and stretch suddenly the muscles of the calf of the leg, these muscles respond by a contraction and the foot is pushed down, and if I continue my upward pressure this process is many times repeated, and the foot keeps vibrating up and down, which is a phenomenon that is called ankle clonus.

Let us see what are the consequences of this exaggeration of the tendon reflexes. In the first place, as regards the walk of the patient, you see that it is very different from the walk of locomotor ataxia. Instead of being thrown about in all directions, the legs are moved very little. Instead of violent, quick movements, the movements are very slow, and it seems as though the patient was meeting with some resistance from his muscles when he tried to walk. This is really the case. When he tries to bring his leg forwards the glutei muscles and the muscles on the posterior part of the thigh must relax and must be stretched or extended very considerably. Now, this extension of the muscles is very apt to cause a reflex contraction of them, and hence the movement must be made very cautiously and slowly, and even then the muscles offer some obstacle. The same thing takes place in every movement that the patient makes; the muscles, which ought to relax and allow themselves to be freely stretched, do not do so easily, and all movements are necessarily slowly and difficultly made. Again, when the patient tries to stand with his feet close together, as is natural in such a position the body is apt to waver a little from side to side, and each slight waver stretches the muscles of the opposite side, which answer by too strong a contraction, and thus the body is thrown violently towards the other side, which in turn stretches the opposite muscles, and so the body is thrown into stronger and stronger vibrations. In the same way when the toe is on the ground and the heel elevated the leg vibrates just as in ankle clonus and for the same reason; or when any muscle is stretched the muscle and the limb are apt to vibrate. In short, by this increase in the tendon reflexes we can explain the difficult and stiff walk and the trembling of the legs, which are the principal symptoms of which Mr. A. complains; for there is no pain nor sensory disturbance in this case whatever. The only other thing that he complains of is frequency of micturition. Of course micturition is essentially a reflex act, and the increased frequency of micturition merely means that this reflex act is exaggerated, just as the tendon reflex act is exaggerated. The cutaneous reflexes, are very little, if at all, exaggerated in the case of Mr. A. The whole disease can, then be explained by an exaggeration of the tendon and vesical reflex acts. And now the question comes up, what is the cause of this exaggeration of these reflex acts? The general cause for the exaggeration of any reflex act is that the inhibitory power of the brain is cut off. In every healthy animal there is always passing down from the brain a certain influence which restrains more or less completely the reflex actions of the spinal cord. When this inhibitory influence is removed, as, for instance, when the head of a frog is cut off, the spinal cord alone remaining in connection with the nerves of the body, then there is a great exaggeration of the reflex actions which take place in this spinal cord thus freed from the normal inhibitory action of the brain.

In cases of spasmodic paralysis we always meet at the post-mortem examination with some implication of those cells or fibres from or along which the inhibitory action passes. The inhibitory impulses and the impulses for voluntary motion pass down from the brain along the same fibres, and these fibres you can readily see from these charts.* The fibres start from the central convolutions on each side of the fissure of Rolando, where the cortical centers for the leg, arm and face are situated.

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*The charts here referred to were of such an elaborate nature that they cannot be printed with this article.

From these convolutions the fibres, which are colored dark blue on these figures, run downwards to the base of the brain and pass through the internal capsule—that narrow band of white matter between the nucleus lenticularis on the outer side and the nucleus caudatus and optic thalamus on the inner side. After leaving the internal capsule they pass along the base of the brain, forming the middle of the pes cruris cerebri on each side, and they then pass under and through the transverse fibres of the pons, whence they emerge and form the anterior pyramids of the medulla oblongata. At the lower part of the medulla these fibres, for the most part, decussate and pass over to the lateral column of the opposite side and run downwards through the cord in the posterior part of the lateral columns, only a small part of the fibres being continued directly down in the anterior columns. The same thing can be seen on the other set of figures, which represent transverse sections of the brain and spinal cord at different levels. These fibres, which transmit impulses for voluntary movements and for inhibition, which are colored dark blue in these figures, are called the pyramidal tract, because they form the anterior pyramids of the medulla, and in the spinal cord the larger portion of these fibres is called the crossed pyramidal tract, because this has crossed over from the opposite side; and the smaller portion is called the direct pyramidal tract, because it is continued directly downwards. When this pyramidal tract is diseased in any part of its course, we get the symptoms of spasmodic paralysis, unless the symptoms of the original disease obscure them. Thus, in a case of tumor of the brain which was lately at St. Peter's Hospital, where the tumor was situated at the cortical center for the leg — that is, at the superior extremity of the posterior central convolution—we had symptoms of spasmodic paralysis in the leg of the opposite side and to some extent in the other leg also. In another case in the same hospital, where the tumor pressed on the right crus cerebri, there were symptoms of spasmodic paralysis in the left leg. In cerebral hemorrhage involving, as it usually does, the internal capsule, we usually have some symptoms of spasmodic paralysis; and the same is true of a case of transverse myelitis at present in St. Peter's Hospital, where the pyramidal tracts are cut across in the middle dorsal region. In all these cases, however, the symptoms of primary disease are so severe as to mask the symptoms of spasmodic paralysis. Simple, uncomplicated cases of spasmodic spinal paralysis, such as we suppose this one to be, are due to a sclerosis of the posterior part of the lateral columns of the spinal cord.

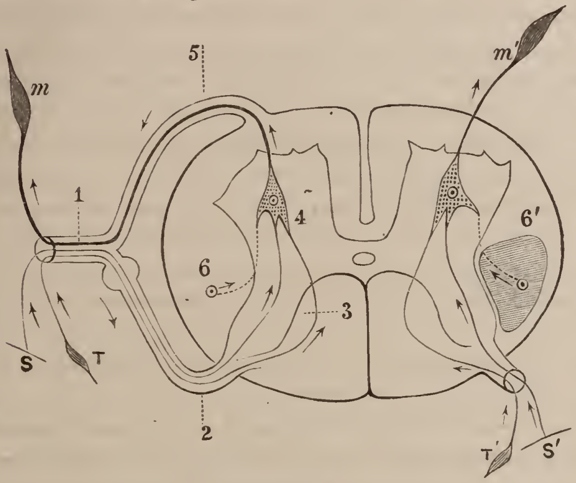

FIGURE 2.

Figure 2 is a schematic representation of a transverse section of the spinal cord. The left side of the figure represents the healthy spinal cord. The various groups of nerve cells in the anterior horns are represented by one large cell (4), which is connected with nerve fibres of the anterior roots (5), those of the posterior roots (2, 3), and also with the fibres of the crossed pyramidal tract (6), which are situated in the posterior part of the lateral columns, and which convey the voluntary and the inhibitory power downwards from the cortex of the brain. On the right side of the figure is represented the lesion of spasmodic spinal paralysis (6′). The sclerosis, or chronic inflammation, is limited to the posterior part of the lateral columns—that is, the crossed pyramidal tract. The reflex arcs are unbroken. The disease involves merely the fibres which transmit voluntary and inhibitory power. The disease is not so severe as to destroy, but merely to impair, the function of these fibres. Mr. A. is not absolutely paralyzed; he is merely weak. In the same way the tendon reflexes are not excessively, but only moderately, increased. The most delicate reflex for testing the absence of inhibitory power is the tendon reflex, and we accordingly find in the case of Mr. A., which is a recent and a not very severe case, that the cutaneous reflexes are only very slightly or not at all increased, while the tendon reflexes are very much increased, as is also the vesical reflex. From this representation of the lesion of spasmodic spinal paralysis we can readily understand that the two great symptoms of the disease must be weakness and increased reflex action, and it is from these two symptoms, viz., muscular paralysis and muscular spasm, that the disease has received the name of spasmodic paralysis. From the figures 1 and 2 we can readily understand the other names which are given to these diseases on account of the anatomical lesion, locomotor ataxia being often called sclerosis of the posterior columns, or simply posterior sclerosis, and spasmodic paralysis being called sclerosis of the lateral columns, or lateral sclerosis.

We have, then, these two very different pictures of the two diseases. In spasmodic spinal paralysis we have a sclerosis, or chronic inflammation, of the pyramidal tracts in the spinal cord, and in consequenc of this the passage of voluntary impulses from the brain is somewhat impaired, and there is general muscular weakness; and, furthermore, the inhibitory influence from the brain, is, to a certain extent, cut off, and in consequence the reflexes, especially the tendon reflexes, are greatly increased. In consequence of the increase in the tendon reflexes, the muscles will not allow themselves to be stretched readily, and hence will not relax and allow of rapid movements. All movements become slow and difficult, and the increased tendon reflex is very apt to lead to general trembling similar to the the ankle clonus.

In locomotor ataxia, on the other hand, the inflammation commences around the filaments of the sensory nerves. The products of the inflammation press upon the nerve filaments and cause pain, which is referred, as usual, to the termination of the nerves, and this pain is the first symptom of the disease. As the inflammation does not attack the whole nerve, but only filaments of it, so the pain is referred not to the whole nerve, but to little patches not larger than a silver dollar; and as also the inflammation attacks the posterior horns, but especially the posterior columns, so the pain is felt in the skin, but especially in the deeper tissues. The nerve accommodates itself to the pressure, and the pain ceases until the pressure becomes again so great that the nerve becomes again painful, and so there are many attacks of pain at varying intervals. Finally the nerve filament becomes destroyed, and then little patches of anæsthesia are found. Not only the skin, but also the deeper tissues, become anæsthetic, and especially the muscular sense is lost, and for the same reason the tendon reflex disappears. In consequence of the loss of muscular sense, the patient cannot tell in what condition of contraction his muscles are nor in what position his legs are, and his movements become very awkward and violent, because, to make sure of each movement, he contracts his muscles too strongly. He supplies the loss of the muscular sense in part by the use of his eyes, and when he can no longer use his eyes he becomes exceedingly helpless.

Such are the principal symptoms of the two diseases. My object in this short address was not to give any detailed description of the diseases, but to point out merely some of the important points in the differential diagnosis, and especially to demonstrate to you that with an understanding of the anatomy and physiology of the nervous system the comprehension and diagnosis of nervous diseases becomes very simple, while without a knowledge of the anatomy and physiology the comprehension of nervous diseases is impossible. That is why I devote so many lectures in my course in the college to a review of the anatomy and physiology of the nervous centers, which the students have already learned in other courses.

DISCUSSION.

Dr. S. B. **Ward** gave the following particulars of a case of ataxia of supposed syphilitic origin: October 6, 1884. Mr. A. B., aged 43. Patient contracted syphilis, followed by well-marked secondary symptoms, in 1870. Since then has enjoyed good health until three weeks ago, when he noticed that his left leg became numb, and that he had lost all feeling of sensibility to temperature with his right leg, as, for instance, with his right leg he could not tell whether the water of his bath was hot or cold. At that time he could walk without any difficulty. Since then his left leg has gradually grown weak and awkward in its movements, until to-day he can scarcely walk, and even in his room he has to take hold of furniture and the walls in walking. When he has been constipated during the past three weeks he has felt as though a band of iron were tied about his abdomen, and he has that feeling very strong to-day. He has been constipated of late, and since yesterday he has had some difficulty in micturition. He cannot walk as well in the dark as in the light. Has never had any sharp pains in legs, but six or seven years ago had an attack of articular rheumatism. Has no cough nor thoracic symptom nor cerebral symptom; appetite fair; no loss of muscular sense—that is, he always knows in what position his legs are. Physical examination—strong frame; no disturbance about head or upper part of body; walks with difficulty; can stand with feet together, but totters and would fall when eyes are shut; movements of right leg strong and certain; movements of left leg weak and show a trace of ataxia; sensibility of left leg in regard to tactile, painful and thermic sensation, normal; slight blunting of tactile sensibility of right leg and complete absence of thermic and painful sensibility of right leg; tendon and cutaneous reflexes of right leg normal; increased knee phenomenon and slight ankle clonus of left leg; plantar and cremasteric reflexes normal; umbilical reflex from lower part of abdomen normal, but absent when upper part of abdomen on left side along edge of ribs is irritated; very decided blunting of tactile sensibility along eighth and ninth intercostal nerves on left side; no deformity nor tenderness along spine; syphilitic scars on legs and back. When skin of right leg is transfixed by a pin, patient feels it as a tickling sensation, and sometimes he feels it as a tingling in left hypochondrium at termination of eighth and ninth intercostal nerves. Sometimes when right hypochondrium is touched patient feels it in left hypochondrium. Patient is now taking Pot. Iodid. grs. v, t. i. d., and Hydrarg. Bichlorid. gr. 1-30, t. i. d. Increase KI to grs. x, t. i. d., and rapidly to grs. xx, t. i. d. Cauterize back.

November 1. Patient has been for some time taking KI grs. xxv, t. i. d., and his back has been cauterized every eight or ten days. He has made very great improvement. His left leg seems to him as strong as his right. He can walk about the room apparently as well as ever. He can stand on either leg. Tactile and painful sensibility perfect over whole of right leg and left also. Patient cannot distinguish temperature. At the moment of contact a cool body is felt as a tingling pain, which is of only momentary duration. A hot body is not felt at the moment of contact, but soon afterwards this painful tingling appears, and grows more severe the longer the hot body remains in contact with the skin. Plantar and patellar reflexes normal in right leg; increased in left leg, and ankle clonus also present.

December 30. Heard that he was dancing at a party last night.

In this case, since the arms and upper part of the body are normal, the lesion must be in the dorsal region or lumbar enlargement of the cord, and since the reflex actions of the leg and for the bladder are not destroyed, the lumbar enlargement must be fairly healthy, and the lesion must be in the dorsal region. Since we find blunting of tactile sensibility and absence of cutaneous reflexes over area of distribution of eighth and ninth intercostal nerves on left side and nowhere else over the body, it is evident that the lesion must involve the posterior horns of gray matter on the left side at the levels of the entrance of the eighth and ninth dorsal nerves. From this point it must extend outwards and forwards into the posterior part of the lateral column and involve the pyramidal tract—that is, it must impair the conduction of those fibres along which impulses for voluntary movement pass downward from the brain to the muscles of the left leg, and hence causes the weakness of the left leg; and, since the inhibitory power of the brain passes down along the same fibres, the reflex actions of the left leg, especially the tendon reflexes, are increased. We know that the motor nerve fibres pass down on the same side of the cord as that by which they leave it, while the sensitive fibres, very soon after entering the cord, cross over and run up on the opposite side Therefore, in this case, where the lesion is on the left side, we get a disturbance of motion on the left side, but a disturbance of sensation on the right. We know, further, that the nerves conveying cutaneous and muscular sensation run up in the columns of Goll, while the nerves conveying impressions of pain and temperature run up in the gray matter, probably in or near the columns of Clark. In this case, then, as there is little or no disturbance of tactile sensibility, but only of pain and temperature, it is evident that the gray matter of the cord only is affected, while the column of Goll is intact. Hence, from a consideration of the symptoms of this case, we can say, from our knowledge of the anatomy and physiology of the spinal cord, with much confidence, that the disease commenced in the gray matter at the root of the posterior horn on the left side at the level of the eighth and ninth dorsal nerve roots, and then involved, moderately, either by extension or pressure, the posterior part of the left lateral column. Such an isolated lesion could be due only to a hemorrhage or a tumor. The symptoms came on too slowly for a hemorrhage, and hence must have been due to a tumor, which, from the history of the case and from the rapidity with which it disappeared under treatment, was undoubtedly a gumma.

In this case there was not complete paralysis, but simply a very decided paresis of the muscles of left leg, and strong impressions of pain on right leg caused a tingling sensation, and long-continued application of very hot water caused also a painful tingling. The very slight blunting of tactile sensibility of right leg was probably due to a moderate pressure an the column of Goll caused by the growing tumor.

Dr. Lorenzo Hale spoke of a number of cases of ataxia which he had seen in the Dispensary of the Albany Hospital a few years since, when Dr. W. H. Murray, Dr. Stonehouse and others were in charge. These patients were all women, and, as far as he had known, there was in no case a syphilitic history. One of these women had fractured a tibia while in bed at night, and did not discover the injury until the next morning. She attributed the accident to the unconscious violence of ataxic movements.

In a case in private practice, where ataxia in a woman was apparently a sequel of syphilitic infection, iodides and mercurials gave no results. The patient was under treatment for ten years, and claimed to get great relief from quarter to half-grain doses of solid extract of belladonna. A curiosity about this case was that the administration of tincture of belladonna, even in a one drop dose, was always followed by loud complaints of "horrible cramps and chills in the back," and yet the solid extract was demanded in large doses.

In another case, strychnia was apparently substituted by mistake for ext. nucis vom. in some pills, prepared from a prescription which the patient had been using for a long time. But one, only, of the last lot of pills had been taken, and about two hours later I found the patient in spasms. After recovery from this toxic condition, he claimed for some years to be entirely relieved of his neuralgic pains and ataxic symptoms.

Dr. Jno. Ben. Stonehouse said that in some dispensary cases referred to by Dr. Hale a syphilitic history had been revealed upon subsequent inquiry, and that he had referred to a few of these cases in a paper read before this Society some years ago. [See Vol. III., Transactions of the Medical Society County of Albany, p. 257.]

A DOCTOR'S BILL OF THE LAST CENTURY.

The following bill was found among some old papers belonging to Dr. Thomas Hun, and may be interesting as a specimen of old fashions.

Doctor Samuel Stringer was a distinguished surgeon and practitioner of medicine, who came from Maryland to Albany about the close of the old French war, and continued to practice here until his death in 1817. He was at the head of the profession in this part of the country, and occupied a high social and political position. He is still remembered by a few as he appeared grandly dressed in the costume of the last century, with ruffles on his shirt bosom and wrists, short breeches and with silver knee- and shoe-buckles.

The bill is rendered in pounds, shillings and pence, but it is to be remembered that in the currency then in use the shilling was equal to twelve and a half cents, and the pound was equal to two dollars and a half of our money.

Mr. Leonard G———, Jun'r,

1795		To Sam'l Stringer,		Dr.
Decemb'r	22	To Amt. of Acct. Rendered		£55 – 8 – 4
1796				
Jan'y	13	" Elix: Paregor: ʒ iv		0 – 4 – 6
	19	" Emp: Com:		0 – 1 – 6
Feb.	4	" Gutt: Corrob: ℥ ij	Harriet	0 – 4 – 6
	5	" Gutt: Paregor:		0 – 4 – 6
	11	" Aq: Veget: Min: lbiss		0 – 5 – 0
	16	" Aq: Veget: Mineral: lbj		0 – 2 – 6
	22	" Pilul: Deobstrue: No. xxiv	Harriet	0 – 4 – 0
	25	" Aq: Veget: Min: lbj		0 – 3 – 0
March	9	" Pilul: Alter: No. xxx	Sp	0 – 4 – 0
	7	" Gutt: Paregor: ʒ iv		0 – 4 – 0
	10	" Man: Op't & Cathart:		0 – 4 – 0
	21	" Pilul: Anodyn: No. vj		0 – 3 – 0
	25	" Elix: Paregor:		0 – 4 – 0
April	2	" Pilul: Anody: No. xij		0 – 6 – 0
	3	" Aq: Veget: Min: ʒ 8 Vial		0 – 3 – 0
	6	" Pilul: Corrob: No. xix	Harriet	0 – 3 – 0
		" Pilul: Anod: No. xij 3/- V. to 2/-	Spouse	0 – 5 – 0
	7	" Ess: Burgam:	Do	0 – 1 – 6
	13	" Aq: Veget: Min: ʒ 8	do	0 – 2 – 6
1796		" Pilul: Anod:	do	0 – 1 – 6

April	20	“	Pulv: Alter: No. xij	Ch'd	£0 – 8 –
		“	Sol: Alter: ℥ viij	do	0 – 8 – 0
	28	“	Elix: Paregor: ℥ iv & Phial		0 – 4 – 6
May	19	“	Dilating an Abscess in your Wife's Breast 24 Jan'y & dressing Do. to 14th Inst. Inclusive		8 – 6 – 6
	31	“	Elix: Paregor: ℥ iv		0 – 4 – 0
June	3	“	Plumb: Nigr: ℥ ij		0 – 0 – 8
	11	“	Sal: Vol:		0 – 1 – 0
	14	“	Pulv: Peruv: No. xij	John	0 – 9 – 0
	18	“	Ungt: Epulot:	Wench	0 – 1 – 0
	21	“	Ungt: Cærul:		0 – 1 – 6
July	7	“	Ungt: Epulot:	Johnny	0 – 1 – 0
	8	“	Ess: Lymon:	Do	0 – 6 – 0
August	2	“	Pilul: Anod: No. vj	Harriet	0 – 3 – 0
	10	“	Pilul: Febrif: rub: xij	Polly	0 – 4 – 0
	11	“	Ungt: Cærul:	Do	0 – 2 – 0
	12	“	Pulv: Diaphor: No. vj	do	0 – 6 – 0
		“	Haust: Diaphor:	do	0 – 3 – 0
	13	“	Bolus: Diaphor: No. vj	do	0 – 6 – 0
		“	Ingred: Cathart:	do	0 – 3 – 0
	14	“	Bol: rept: vj	do	0 – 6 – 0
		“	Haust: Emet:	Rachel	0 – 2 – 6
	15	“	Flor: Sulph: lbss		0 – 1 – 6
	20	“	Pulv: Laxat:	Miss Polly	0 – 2 – 0
	26	“	Pilul: Anod: No. ij	Sp	0 – 2 – 0
		“	Haust: Anod:	do	0 – 2 – 6
		“	Ol: Camphor: ℥ iij	do	0 – 4 – 6
	27	“	Haust: rept:	do	0 – 2 – 6
		“	Haust: rept:	do	0 – 2 – 6
		“	Do. rept:	do	0 – 2 – 6
	28	“	Pilul: Anod:	do	0 – 1 – 0
	29	“	1 Bottle Stoughton Bitters		0 – 1 – 6
Sep't	6	“	Pilul: Pacif: No. iv	Harriet	0 – 2 – 0
	10	“	Lin: Sapon: ℥ j	Sp	0 – 1 – 6
	11	“	Do.	do	0 – 1 – 6
	13	“	Haust: Emet:	do	0 – 2 – 6
		“	Pilul: Anod:	do	0 - 1 – 0
	16	“	Rad: Dianth:	Rachel	0 – 1 – 6
	20	“	Emp: ord: Derivit: Dol	Sp	0 – 2 – 0
		“	Elix: Paregor:		0 – 2 – 6
	25	“	Spir: Terebinth in Vial	Jack	0 – 2 – 0
	29	“	Emp: usu: exter:	Sp	0 – 1 – 0
Oct'r	2	“	Smalts		0 – 0 – 8
	16	“	Pilul: Anod. No. ij	do	0 – 2 – 0
	20	“	Gutt: Emmen:	Gin	0 – 3 – 6
	21	“	Epithem: Emol:	Ch'd	0 – 2 – 6
	23	“	Visit	Jinn	0 –10 – 0
		“	Extracting Bean from Ch'd Nose		0 – 2 – 6
	24	“	Elect: Corrob:	Jinn	0 – 6 – 0
		“	Cathart: cu Mer:	do	0 – 2 – 6
	26	“	Epithem: rept:	Ch'd	0 – 2 – 6
Nov'r	3	“	Emp: Robor: Dors:	Jinn	0 – 6 – 0
	8	“	Emp: Robor: Pect:	Negro	0 – 3 – 6
	21	“	Powder Blue ℥ iv		0 – 1 – 3
Decemb'r	4	“	Flor: Sulphur: lbss	pr Peter	0 – 1 – 6
1797 Feb'y	10	“	Attendance and Delivering your Wife		5 – 0 – 0
		“	Mag: cal: ℥ j		0 – 3 – 6
		“	Pulv: Rhei:		0 – 1 – 0
		“	Elix: Paregor: ℥ ij & Vial		0 – 2 – 6

Feb'y	18	"	Mist: Stomach:	Spouse	£0 – 5 – 0
		"	Pilul: Anod:	do	0 – 1 – 0
		"	Mist: Sest: ℥ vj	John & Effy	0 – 6 – 6
	27	"	Emet:	Harriet	0 – 2 – 6
April	10	"	Elix: Paregor: ℥ ij & Vial		0 – 2 – 6
		"	Ol: Spica: ℥ ij cu Vial		0 – 2 – 6
May	4	"	V to	Rachel	0 – 2 – 6
		"	Pulv: Refrig: No. viij	do	0 – 6 – 0
	6	"	Ars: Alb:		0 – 1 – 0
	14	"	Extracting Tooth	John	0 – 2 – 6
		"	Bird Lime		0 – 1 – 0
July	24	"	Pill: Peruv: rub: Dos: xij	Harr't	0 – 9 – 0
Oct'r	11	"	Flor: Sulphur: lbj		0 – 3 – 0
1798 Jan'y	7	"	Emp: Epispast:	Mrs. White	0 – 3 – 6
	21	"	Odont: Emp:	Sp	0 – 1 – 6
Feb'y	24	"	Flor: Sulphur: lbss		0 – 1 – 6
		"	Anto: Pulv: lbss		0 – 2 – 3
April	25	"	Elix: Paregor: ℥ iij		0 – 3 – 0
	28	"	Emp: Vesicat: Pector	Negro	0 – 3 – 6
		"	Pilul: Antiphtis: No. 96	Negro	0 – 8 – 0
		"	2 Cakes Shaving Soap		0 – 2 – 0
May	7	"	Haust: Emet:	Spouse	0 – 3 – 0
	8	"	Pilul: Febrif: No. xij	Self	0 – 4 – 0
		"	Emet:	Ch'd	0 – 2 – 0
		"	Do	Neg Ch'd	0 – 2 – 0
	9	"	Emp: Calid: Later:	Sp	0 – 3 – 6
	14	"	1 Cake Shaving Soap	Self	0 – 1 – 0
August	2	"	Rad: Anthelm:	Ch'd	0 – 1 – 6
	4	"	Pulv: Refrig: No. vj	do	0 – 4 – 0
	10	"	Visit	do	0 –10 – 0
		"	Gutt: Sedat:	do	0 – 2 – 0
		"	Rad: Dianth:	do	0 – 1 – 6
	15	"	V to	do	0 –10 – 0
		"	Julep: Card:	do	0 – 3 – 0
	26	"	1 Bottle Steers Opodeldoc		0 – 6 – 6
1799 Jan'y	30	"	Emet:	Son	0 – 1 – 0
Feb'y	9	"	My Attendance to Mrs. G——— from 7th Inst. to this day and delivering her..		6 – 0 – 0
		"	Magnes: Alb:	Inf.	0 – 1 – 0
		"	Pul: Rh:		0 – 1 – 0
		"	Sem: Anis:		0 – 0 – 6
		"	Manna		0 – 1 – 0
		"	Apparat: pro Enem:		0 – 2 – 0
					£93 – 8 – 8
			Cont: Cr: Sund: ren'd.		£5 – 0 – 0
					£88 – 8 – 8

Sage tea douches cured chronic catarrhal rhinitis accompanied by profuse purulent discharges mingled with dark scales, and in which the integument covering the nose and the adjoining sides of the face were red and swollen, after other remedies had been used in vain. In ordinary catarrh, infusion of salvia is valuable.—*D. Hayes Agnew, in Ther. Gaz.*, Jan.

BROMINE INHALATION IN CROUP.

BY GEORGE E. GORHAM, M.D., ALBANY.

[FOR ALBANY MEDICAL ANNALS.]

Croup is defined by William Squire, of London, as an inflammation of the larynx and trachea in children, commencing in the air passages and often extending into the bronchi. It induces thickening of the mucous membrane and an altered secretion, which may become either membraniform or purulent. There is frequent sharp, harsh, ringing cough; difficult breathing, with loud, shrill, inspiratory sound; altered voice, first hoarse, afterwards whispering or extinct; fever, loss of appetite, thirst, and little or no difficulty of swallowing.

The characteristic group of symptoms attending impediment to the entrance of air into the lungs has been known by many names, and many different diseases have been included under some one general appellation. Our literature shows that croup first began to make its way out from among the many diseases with which it was confounded in 1713, when Dr. Patrick Blair noticed and described a difference between "chink cough" (hooping cough) and "the croups." Since then capillary bronchitis, hooping cough and quinsy have been assigned their respective proper places; and yet to day there is great confusion about the diseases called croup.

We have at least five varieties of croupal disease — laryngismus stridulus, spasmodic night croup, croupal catarrh, pseudomembranous laryngitis, laryngeal diphtheria.

Laryngismus stridulus is a condition in which there is sudden complete or incomplete approximation of the vocal cords. In the former we have arrest of respiration and in the latter stridulous breathing. It is distinctly intermittent, coming and going suddenly without febrile excitement. The cause of this condition is somewhat obscure, but of two things we are comparatively certain: That every case is attended with disturbed condition of the nervous centers, and that the immediate cause of the stridulous breathing and apnœa is spasm of the abductors of the vocal cords. The rachitic and scrofulous diatheses are credited with bringing about the condition of the brain to induce these spasms, while cold air upon the glottis and fluids in the trachea, and teething, are said to act as exciting causes.

Croupal catarrh, or acute catarrhal laryngitis, the common form of croup with which all are familiar, is easily recognized, and its treatment does not give us the anxiety which pseudomembranous laryngitis or membranous croup does.

The object of this short paper is to call attention to a limited, yet very successful, mode of treatment of the two latter forms of croup.

In the spring of 1876 I treated three equally severe cases of membranous croup; the first one died, and the other two recovered under the administration of aconite and kali bichromicum during the first stage, and bromine and inhalation of fumes of bromine, by dropping it in water, in the second stage. Believing bromine to have been the curative agent in these cases, I resolved to try it in my next case. My first opportunity presented itself in the case of Willie C., who had been treated for twenty-four hours by his mother with aconite and spongia, the patient steadily growing worse. The breathing becoming very difficult on the second day, a physician was called in, who administered kali bichromicum, inhalations of lime, hot packs, etc.,for twelve hours, with no effect. At this time I found the child breathing with the greatest difficulty, face distressed and purple, pulse rapid and weak. I applied the steam spray of bromine, which gave marked relief in less than ten minutes, and rapid recovery followed its continued use.

The second case was that of Allen M., aged 6, to whom I was called at two o'clock in the morning, after having prescribed by sending medicine from my office for two days. In this case I was unable to make positive diagnosis of membranous croup, though it had every appearance of it, except seeing the membrane. It was at least a most aggravated case of catarrhal croup, and the relief from the steam bromine spray was immediate and lasting.

In the case of Nellie B. I diagnosed true croup, and applied the spray faithfully, with no apparent effect, the child dying after thirty-six hours' treatment. The same week two of the family were attacked with diphtheria, and probably the first case was one of laryngeal diphtheria.

With this one exception, every case of croupy cough, with labored breathing, which I have treated in two years has been speedily relieved by the bromine spray. In spasmodic croup, sometimes with the first inhalations would come marked relief. In four alarming cases, where a hoarse, catarrhal condition had continued for two or three days, and the breathing had become labored and the family and physician frightened, bromine has brought prompt relief.

I am well aware that in self-limited diseases and in strong recuperative constitutions remedies are often credited with curative virtues which they do not possess; and, again, my experience may have been unique, but until a further trial shall have condemned the practice, I shall have great faith in the use of bromine spray in the treatment of all forms of croup, excepting *laryngeal diphtheria.*

Bromine should be used with a steam atomizer, five drops to the ounce of water, and the spray thrown in the face and mouth of the child for three minutes every ten or fifteen minutes until relief is obtained, great care being taken to prepare the bromine out of the room occupied by the patient, to avoid the irritating effects of the dry fumes of the remedy. My experience teaches me that more harm than good is done by uncorking a bottle in the room or dropping it into hot water, as is the custom of some. If a steam atomizer cannot be obtained, a common toilet atomizer will do, throwing the spray well into the mouth and throat, after the child has had it in the face for a few minutes until he is not afraid of it.

ALCOHOL AND THE VOICE.—Dr. Lennox Browne, before the Society for the Study and Cure of Inebriety, said that out of nearly 400 vocalists, 101 were total abstainers, and many of these were the chief cathedral singers, 65 only took stimulants at meals, 65 only took them at supper, 47 both at meals and supper, while the remaining took stimulants whenever they felt inclined and an opportunity offered; 75 per cent. never took stimulants immediately before singing, while 20 per cent. occasionally did so. Arguing from these figures, Dr. B. was of opinion that alcohol is by no means necessary; in fact, the habitual use of it only tended to render the voice husky and indistinct.—*Sanitary Engineer.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:.

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JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

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MEDICAL NEWS.

ALBANY MEDICAL COLLEGE.

The fifty-third Commencement and twelfth Alumni Meeting took place March 4, as per programme published in our January and February numbers. The Alumni Lectures and some of the addresses will probably be printed in the ALBANY MEDICAL ANNALS in April and May.

The newly-elected officers of the Alumni Association are: President: Dr. Herman Bendell ('62), Albany; vice-presidents, Dr. Walter M. Fleming ('62), New York city; Dr. Edward Sill ('51), Watertown, N. Y.; Dr. P. J. Stanley ('53), Windham, N. Y.; Dr. S. Allen ('65), Hall's Corners, N. Y.; Dr. H. M. Burtch ('82), Salisbury, Conn.; secretary, Dr. Willis G. Tucker ('70), Albany; treasurer, Dr. T. W. Nellis ('81), Albany; historian, Dr. Jno. Ben. Stonehouse ('71), Albany; executive committee, Dr. William Hailes, Jr. ('70), Albany; Dr. E. A. Bartlett ('79), Albany; Dr. C. M. Culver ('81), Albany (in place of Dr. Nellis, nominated for treasurer); Dr. P. C. Hoag ('78), New York city; Dr. Otto Ritzman ('79), Albany.

At the commencement exercises the curators commended highly the proficiency shown by the graduates at their examinations, and awarded honorable mention to theses on "Typhoid Fever," by James P. Marsh, and "Digestive Ferments," by Douglas C. Moriarta.

The following prizes were awarded: For the best senior examination, a set of surgical instruments, to D. C. Moriarta;

for the best report of the surgical clinics of Dr. Van der Veer and Dr. Snow, first prize to A. H. Hoadly, of the junior class; second prize to P. G. Cotter, of the freshman class. Both prizes consisted of pocket cases of surgical instruments. For the best report of Dr. Merrill's eye and ear clinic, Ernest L. Angus was awarded an ophthalmoscope.

The appointments on the staff at St. Peter's and the Albany hospitals, open to competitive examination among members of the senior class, were awarded as follows: St. Peter's—Senior resident physician, Ralph A. McDougall; junior resident physician, Silas H. Parks. Albany Hospital—Junior resident physicians, Elmer E. Larkin and John H. Van Rensselaer.

It was announced that the honorary degree of doctor of medicine had been conferred on Prof. Harrison E. Webster, A.M., of the University of Rochester, formerly professor of physiology at the Albany Medical College.

The graduates were: Isaac N. Albright, New Salem, N. Y.; Ernest L. Angus, Samuel E. Armstrong, Edward J. Brown, Terence L. Carroll, Albany; Andrew C. Crounse, Knowersville, N. Y.; Sylvanus C. Curran, East Greenbush, N. Y.; Irving S. Edsall, Prattsville, N. Y.; William Cady Fawdrey, Albany; Charles C. Flint, Lenox, Mass.; Charles W. Geel, David Gilliland, Albany; Robert J. Gondie, Troy, N. Y.; Alfred N. Guffin, Central Bridge, N. Y.; Josiah Hasbrouck, Jr., Port Ewen, N. Y.; Alexander L. Johnson, Gloversville, N. Y.; Charles R. Knapp, Delhi, N. Y.; Elmer E. Larkin, West Chazy, N. Y.; Albert Marsh, Albany, N. Y.; James P. Marsh, Troy, N. Y.; Ralph A. McDougall, Duanesburgh, N. Y.; Martin McHarg, Albany, N. Y.; Edwin A. Miller, Meredith, N. Y.; Adelbert E. Moody, Lawrence Lake, N. Y.; Douglas C. Moriarta, Saratoga, N. Y.; Herman F. Parmer, East Schodack, N. Y.; Silas H. Parks, Great Barrington, Mass.; Hudson Rider, Chatham, N. Y.; Thomas P. Scully, Cohoes, N. Y.; George M. Stillman, Berlin, N. Y.; Fred. J. Tompkins, Central Bridge, N. Y.; John H. Van Rensselaer, Wiltonville, N. Y.; Howard J. Wood, Troy, N. Y.

ALBANY COLLEGE OF PHARMACY.

At the fourth annual commencement, Monday evening, March 2, 1885, diplomas conferring the title of "Ph.G." were granted to the following graduates: Edgar H. Page, Henry Popp, Wil-

liam H. T. Tipping, Albany; George A. Dykeman, Catskill; John Hurley, Little Falls; Birt L. Maltbie, Cattaraugus; Richard H. Roth, Rondout; James W. Stafford, Canajoharie.

Mr. Charles H. Gaus, from the committee on prizes, announced the following awards: First prize for the best final examination, twenty-five dollars, presented by Mr. Archibald McClure, to Birt L. Maltbie of Cattaraugus. Second prize, twenty dollars, presented by the faculty, for the next best final examination, to Henry Popp, of Albany. Honorable mention, Richard H. Roth, of Rondout. Third prize, twenty-five dollars, presented by Mr. Louis Sautter to the student passing the best junior examination, Charles N. Gilbert, of Albany. Honorable mention, William R. Faries, of Minneapolis; Percival Welch, of Cooperstown, and I. E. Pierson, Jr., of Auburn.

The annual meeting of the Alumni Association was held at Alumni Hall at 4 P. M., March 2. Mr. Leonard H. Wheeler, president of the Association, presided. Mr. Frank J. Smith, of Albany, read his report as treasurer, showing a balance on hand. Mr. Frank Richardson, the historian, gave an interesting account of the location and occupation of each of the graduates. A handsome alumni pin was also adopted.

The following officers were chosen for the ensuing year: President, Frank Richardson, Rutland, Vt.; first vice-president, W. H. T. Tipping, Albany; second vice-president, A. R. Griffith, New York city; secretary, George Boucher, Albany; treasurer, Frank J. Smith, Albany; historian, DeBaun Van Aken, Albany; executive committee, Henry Popp, Albany; Leonard H. Wheeler, Albany; Orrel T. Larkin, Plattsburgh, N. Y.

AN ALBANIAN HONORED — THE NEW WESTBOROUGH INSANE ASYLUM.

At the last session of the legislature of Massachusetts the Reform School at Westborough was ordered to be discontinued. The land, comprising upwards of two hundred acres, and the buildings, were placed in charge of a board of trustees, of which Col. C. R. Codman is chairman. The institution is thereby organized for the homœopathic treatment of the insane, under the name of the Westborough Insane Hospital. In order to make the necessary alterations, the sum of $150,000 was appropriated. The governor and council have approved the plans for the proposed modifications of the buildings, the details of which are now being prepared by Mr. Clough, a well-known architect of Boston. The trustees have appointed Dr. N. Emmons Paine ['75], of this city, supervisor of building, to become the superintendent of the hospital when the asylum is completed and patients admitted. Dr. Paine is well qualified for this responsible position by his experience at the Middletown Insane Asylum, where for several years he held the office of assistant physician. He will leave Albany to take charge of the work about the first of April, 1885. The present buildings are large and imposing, having a frontage of over 400 feet, with additional wings of large dimensions. When the proposed changes are completed, accommodations will be afforded for 325 patients. The buildings are constructed of brick, and are situated on an eminence that slopes down across a wide lawn to a beautiful lake. The location is unusually attractive and healthful. The village of Westborough contains over 6,000 inhabitants. It is situated on the Boston and Albany railroad, twelve miles east from Worcester and thirty-eight miles from Boston, and is easily accessible from all parts of Massachusetts and adjacent states.—*The Argus.*

UNION MEDICAL ASSOCIATION.

The annual meeting of the Union Medical Association of the Counties of Warren, Washington, Saratoga, Rensselaer and Albany was held in the parlors of the Rockwell House, Glens Falls, on Tuesday, the 24th of February.

Drs. W. D. Aldrich and F. H. Stevens were elected to membership.

A paper was read by Dr. E. A. Bartlett, of Albany, entitled "Medical Use of Electricity."

Dr. A. O. Ameden, of Glens Falls, gave notes of his experience with

RATTLESNAKE VENOM IN A CASE OF TETANUS.

He said that the famous trotting horse Duroc, having received a punctured wound in the foot, experienced all the symptoms of tetanus. After the skill of veterinary surgeons had been exhausted and the horse was given up to die, he was permitted to try an experiment. At this time the muscles were in a condition of extreme tension, *risus sardonicus* was marked, temperature 102° F., respirations 120, pulse not materially accelerated. All the venom obtained from the head of one snake was injected hypodermically at a point in the lower part of the neck, in front. Almost immediately there was relaxation of the muscles, and in two hours there was profuse perspiration, the respirations were reduced to 90 and the temperature to normal. At the seat of injection there arose a tumor some six or seven inches in diameter. This soon disappeared, no sloughing nor suppuration having taken place. The horse seemed to have been relieved entirely of the symptoms, but, in five days after, he suddenly dropped dead from some cause unknown to the writer.

In answer to questions, Dr. Amidon said that the amount of venom obtained from a snake's head varies somewhat, but will average fifteen drops. It is obtained from a little sac which lies just along the inside of the jaw. Having dissected out this little sac and emptied the contents upon a glass slide, they were left to dry. In a short time there appeared a substance arranged in needle-like crystals, of a pale straw color and raised into a cone. This substance was put into a vial and had been kept some four months when used in the case reported. It is about as soluble in water as quinine is and imparts to the water a milky appearance.

The officers elected for the ensuing year are: President, Dr. Miles B. Jones, Sandy Hill; vice-presidents, Dr. J. W. Moore, Cohoes; Dr. R. H. Stubbs, Waterford; Dr. D. D. Bucklin, Lansingburgh; Dr. W. D. Aldrich, Warrensburgh; secretary and treasurer, Dr. A. O. Ameden, Glens Falls; executive committee, Dr. S. J. Finch, Fort Ann; Dr. W. B. Webster, Dr. C. C. Schuyler, Troy; Dr. G. R. Martin, Weavertown; Dr. T. W. Nellis, Albany.

A letter was read announcing the death of Dr. B. W. Noxon, of Ballston.

On motion the president appointed Drs. Lawrence, Peters and Reynolds a committee to draft appropriate resolutions.

It was decided to hold the next meeting, which occurs the second Tuesday in May, at Cohoes. E. A. BARTLETT, M.D.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.

President, Dr. M. G. Planck; vice-president, Dr. Geo. F. McDonald; secretary, Dr. Charles C. Duryee ('81); treasurer, Dr. John L. Schoolcraft ('79); delegate to Medical Society State of

New York, Dr. L. Ellwood; delegate to American Medical Association, Dr. H. C. Van Zandt ('65); censors, Dr. W. L. Pearson ('78), Dr. L. T. Vedder ('81), Dr. J. Reagles.

SCHENECTADY COUNTY ACADEMY OF MEDICINE.

President, Dr. Charles C. Duryee ('81); vice-president, Dr. H. V. Hull ('74); secretary and treasurer, Dr. E. P. Van Epps, ('81).

DR. J. EDWIN BOWEN, A. M. C., '84, one of the surgeons in charge of the "Swinburne Dispensary," died on Friday, March 6, 1885, at No. 61 Eagle street, Albany. He had won popular favor as a singer, was at one time musical director in the First Presbyterian Church. He had been a singer in Emmanuel Baptist Church and in All Saints' Cathedral. The funeral was held at his late residence in Albany, on Monday, March 9th, at 4 P. M. A double quartette from All Saints' Cathedral choir rendered appropriate music. The interment was at Cambridge, N. Y., March 10. R. C. PARIS.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

ABSTRACT OF MINUTES OF THE STATED MEETINGS OF DECEMBER 13 AND 17, 1884, AND JANUARY 14, 1885.

A regular meeting of the Society was held December 3, 1884.

Present: President J. D. Featherstonhaugh, Drs. Archambeault, Boudrias, Bendell, T. P. Bailey, Ball, E. E. Brown, Bartlett, Classen, Culver, H. S. Case, Cook, Curtis, DuBois, Hays, William Hailes, Jr., Lorenzo Hale, Lyon, Murray, Miller, Munson, March, W. B. Sabin, Stonehouse, Thompson, Van Allen, Woodward—27.

President Featherstonhaugh, in assuming the chair, said: Gentlemen of the Society—In taking the chair and assuming the responsibilities that are attached to it, I am strongly affected by the associations that cluster about it. Looking backward about twenty years, from the time when the amiable and accomplished late Dr. Pomfret was your presiding officer, to the present, I recall so many men of distinguished merit who have preceded me—alas! most of whom have now gone over to the great silent majority—that it is with sincere humility that I venture to thank you for the honor you have done me, and let me assure you that I appreciate the responsibility no less than I esteem the honor. "The times change, and we, too, are changed in them." Doctors come and doctors go, but the temple of art is perennial. We may each bring to it our contribution, small or large.

Let me ask you all to do your part. With one or two exceptions this Society is the largest county medical society in the state. Whether its usefulness will be commensurate with its size depends upon you.

The medical science of the day is advancing with giant steps. From Germany, France and England come from day to day discoveries in pathology that would have astounded us a few years ago, and yesterday there came to us from Brazil the account of the successful inoculation, on a large scale, for yellow fever at Rio Janeiro.

This Society is our post-graduate school. Let me hope that our meetings will be large and enthusiastic, that the work done will be good, and that the tone and temper of the Society may, as ever, crown the work.

The President announced the following standing committees: Pathology, Drs. William Hailes, Jr., (chairman), R. H. Sabin, Van Slyke, Maurice J. Lewi, Classen and Healey; Hygiene, Drs. Curtis (chairman) Van der Veer, O'Leary, Ward, Tucker, Bartlett and Hall; Registration, Drs. Thompson (chairman), B. U. Steenberg, J. C. Shiland and Culver, Secretary Stonehouse, *ex-officio;* Executive, President Featherstonhaugh, Vice-President Perry and Secretary Stonehouse, *ex-officio;* Drs. Lorenzo Hale and J. U. Haynes.

The minutes of the two preceding monthly meetings were read and approved.

Dr. A. VAN DER VEER nominated Dr. N. Emmons Paine, of Albany, for membership. Referred to the Board of Censors.

A communication was received from the *Index Medicus* asking for a renewal of the Society's subscription to that publication. After some discussion, the communication was, on motion of Dr. Cook, laid on the table until the next meeting.

Dr. W. B. SABIN, in the absence of Dr. R. H. Sabin, reported a case of "Enterolith," and exhibited the specimen. Discussed by Drs. March, Hays, Woodward and Cook. [See page 41.]

Dr. F. L. CLASSEN read the following report of an autopsy, and presented a kidney in a condition of

HYDRO-NEPHROSIS.

The circumstances attending the death of Mr. D. D., aged 60 years, are well known to the members present. He was passing down Ferry street, when M. D. provoked an assault upon him, drew a pistol and shot him in the left breast. After being shot he walked across the street and expired. A post mortem examination showed that the bullet had passed through the third rib, fracturing it obliquely, thence slightly downward and backward through the lower edge of the upper lobe of the left lung to the root of the lung, and was found in an extravasation of blood opposite the fifth dorsal vertebra. About three and a half pints of fluid blood were found in left pleural sac; right cavity free from blood. Slight atheroma of aorta and aortic valves. Liver markedly cirrhotic. Left kidney enlarged, capsule adherent, otherwise normal. Right kidney presented a condition of hydro-nephrosis. Bladder contained two or three ounces of urine. Brain: remains of a previous pachymeningitis, serous effusion at the base.

Hydro.nephrosis is not an uncommon affection. It is produced by some mechanical obstruction in the pelvis of the kidney, ureter, bladder or urethra. The causes of the difficulty are numerous, among which may be mentioned calculi in the pelvis or ureter, stenosis of ureter, ovarian and other tumors, compression of ureter by retroflexion of the pregnant as well as non-pregnant uterus. In looking up the pathology, we find that the lower down the obstruction is situated the more extensive are the portions of urinary tract embraced in the area of dilatation. First the medullary substance atrophies, the papillæ are flattened or dwindle into unrecognizable prominences, the cortical portion at first showing but slight changes, but as the affection progresses this too atrophies. In the highest grades of hydro nephrosis the kidney presents a highly membranous sac, the walls of which consist of dense connective tissue, rich in blood vessels. The fluid contained in the sac is a more or less modified urine.

Dr. D. H. COOK had seen but one other kidney so completely disorganized. This specimen shows how possible it is for a person to live a long period of time with but one acting kidney.

Secretary STONEHOUSE called attention to the fact that no memorial of Jacob S. Mosher had been presented to the State Medical Society, of which the deceased was a permanent member, and moved that Dr. W. G. Tucker be requested to prepare and present a memorial of Dr. Mosher at the next session of the State Society. Carried.

Dr. L. HALE moved that the Committee on Publication be authorized to have plates of the Society's seal prepared for use on official publications. Carried.

Dr. STONEHOUSE asked that some action be taken by the Society providing for the storing in the college building of the copies of the Transactions of the Society now in the hands of the last Treasurer. Referred to Executive Committee, with power.

On motion of Dr. Curtis the Secretary was empowered to compile from THE MEDICAL ANNALS such minutes of the Society as have been omitted from the minute book.

On motion of Dr. H. Bendell, the Secretary was instructed to invite the students of the Medical College to the meetings of the Society.

Adjourned.

A regular meeting of the Medical Society of the County of Albany was held in Alumni Hall, December 17, 1884.

President Featherstonhaugh in the chair.

Present: Drs. Ball, Bendell, Crawford, Culver, Curtis, DuBois, Fleischman, William Hailes, L. Hale, La Moure, Morrow, Munson, N. E. Paine, Stonehouse, Van Allen and Van der Veer, and Dr. C. C. Schuyler, of Troy, a corresponding member.

On motion of Dr. Van der Veer, the Secretary was authorized to renew the Society's subscription to the *Medical Index*.

Dr. BENDELL then read the paper of the evening, entitled "Disease of the Naso-Pharynx as a Cause of Deafness." Discussed by Drs. Van der Veer, Culver, Van Allen and Fleischman. [See page 33.]

Dr. Van der Veer gave notice that a meeting to organize a Medico-Legal Society would be held in Alumni Hall, Saturday evening, December 20, and invited the members of the Medical Society to be present.

Adjourned.

A regular meeting was held January 14, 1885, at Alumni Hall.

Present: President Featherstonhaugh, Drs. T. P. Bailey, Ball, Bendell, E. E. Brown, H. S. Case, Cook, Curtis, J. D. Craig, DuBois, Fleischman, A. Fowler, William Hailes, L. Hale, H. Hun, Keegan, Lyon, March, Mereness, Miller, Morrow, Murphy, Murray, N. E. Paine, Riley, Shanks, B. U. Steenberg, Stonehouse, Thompson, Townsend, Van Allen, Van der Veer, Van Vranken, Ward, Woodward, and Dr. W. O. Stillman, of Albany, and many students.

The minutes of preceding meeting were read and approved.

Dr. John Thompson, of Albany, offered the following:

Resolved, That our President appoint a committee whose duty it shall be to look after and take care of the portraits or works of art belonging to the Medical Society of the County of Albany; and be it further

Resolved, That the committee, when appointed, make all reasonable efforts to secure for our collection the best possible likenesses of deceased members of our Society.

On motion the resolution was laid on the table until the next meeting, that the secretary might have time to ascertain what action had previously been taken by the Society.

A communication from the secretary of the State Society in reference to Transactions for 1884 was received and laid on the table.

A communication was received from N. Eugenia Berry, secretary of the Society for Promoting the Welfare of the Insane, and ordered filed.

The Secretary reported that two numbers of the *Index Medicus* had been received since the last meeting; also that the sixty-sixth annual report of the trustees of the New York State Library been received from the Regents of the University.

On motion of Dr. Ward, the Secretary was instructed to acknowledge the receipt of the volume and return the thanks of the Society.

Dr. Ward moved that the Secretary be directed to have the volume of the *Index Medicus* for 1884 bound. Carried.

Dr. H. Hun then read the paper of the evening, entitled "Differential Diagnosis between Locomotor Ataxia and Spasmodic Spinal Paralysis." [See page 65.]

Dr. Ward reported a case of ataxia depending upon syphilis.

The papers were discussed by Drs. Stonehouse, Mereness, Hailes, Townsend, Van der Veer, Hale and Bendell.

On motion of Dr. Ward the thanks of the Society were tendered Dr. Hun for his paper.

Adjourned.

Jno. Ben. Stonehouse, *Secretary*.

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OVULATION AND MENSTRUATION CONSIDERED IN THEIR PHYSIOLOGICAL RELATIONS.*

BY FRANKLIN TOWNSEND, M.D., ALBANY.

The purport of the subject of this paper may be thus briefly stated: To comprehend, so far as possible, the intimacy of relation existing between the two important functions of ovulation and menstruation in the human female; and the question which will most occupy our attention is as to the dependence of the latter (menstruation) upon the former (ovulation). To realize more fully and to comprehend in the fullest light possible the importance of such a question, can best be accomplished by a foundational knowledge of the morphological factors, with their concurrent physiological attributes which enter into the composition of the female generative organs and which are characteristic of their vital phenomena. The ovary, then, with the uterine mucous membrane, as well as its attached Fallopian tube, must each be considered separately, both in their anatomical and physiological aspects.

In the human kind the ovaries are made up principally of connective tissue, dense and strong, imbedded in which lie the ovaries or Graafian follicles, the whole being supplied with blood-vessels and nerves and covered with an opaque yellowish-white layer of fibrous tissue, called the albugineous tunic. The peritoneum is reflected in the usual manner upon the blood-vessels supplying the organ, and becomes a part of, or better, is continuous with, the broad ligaments. Waldeyer and Leopold state that on the posterior surface of the ovary this membrane does not exist. If this be the case, according to Tait it must be closely consolidated with the tunica albuginea of after life, for, to quote this author, this organ "must obtain a peritoneal covering during its developmental transition."

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*Read before the Medical Society of the County of Albany, February 11, 1885.

The ovisacs, or Graafian follicles, or vesicles, are scattered in the stroma of the cortical substance of the ovary, especially in its most superficial layers. The limitation of the ovules to the peripheral portion is most marked in infancy. After puberty they are apt to invade the bulbous portion. Toward puberty the follicles are found close together. Their number is very great, for, according to Henle's estimation, there must be as many as 36,000 in each ovary, or 72,000 for each female. Sappey's computation is much higher. "The ovaries," he says, "contain, on an average, 600,000 to 700,000 germs." In the embryonic state women possess all the ovisacs they are ever to have. In speaking of the ovary it seems convenient and proper to mention the little body or organ situated in the folds of the broad ligaments, "between the outer extremity of the ovary and the last convolutions of the Fallopian tube," and known as the organ of Rosenmüller, or "parovarium." It appears to be established that this represents simply the remains of the Wolffian body, "a transitory organ which very probably fulfills the function of the kidney before the development of this gland."

The Fallopian tubes, or uterine tubes, are truly "the excretory ducts of the ovaries," or oviducts. Beginning with a study of their extremities, we notice their wide expansion, with fringed edges, termed the "fembriated extremity of the Fallopian tubes," or morsus diaboli. Extending thence from the sides of the cavity of the pelvis, the tubes, lying between the folds of the broad ligament, after successively convoluting finally reach and terminate in the summit of the superior angles of the uterus or its cornua; indeed, "this part of the organ is so much developed at the expense of the cornua that the latter hardly appear to have an existence in the human species, and no trace of them is visible externally. But on opening the uterus its cavity is seen to be somewhat triangular in shape, its upper corners running out to join the lower extremities of the Fallopian tubes. The cornua are therefore consolidated with the body of the uterus and enveloped in the thick layer of muscular fibres."

The ostium uterinum, or orifice of communication between the uterus and tube, is usually filled with mucus. It forms a well-marked boundary between the mucous membrane of these two organs. The diameter of the tube is very small, and in its uterine portion the bore is "capillary," and it is most difficult to distinguish the ostium uterinum with the unaided eye. The walls of the oviduct are in direct contact, and the cavity, therefore, more or less completely obliterated. No valves are to be distinguished throughout its whole course. The mucous membrane lining the tubes is covered by ciliated epithelium, and contains neither glands nor villi. The cilia which cover the free surface of the cells execute movements, the effect of which is to carry on liquids and the ovum to the uterine cavity. In the more early development of the tubes they are relatively larger than the uterine body, and seem to be continuous with one another at their uterine extremities.

In the unimpregnated, but fully developed, uterus, the mucous membrane of the cavity of the body is a thin reddish-gray layer about one cm. in thickness. It is approximated to the inner aspect of the muscular layer without the intervention of submucous tissues, and is composed of ciliated columnar epithelium on a connective tissue basis, containing numerous crypts, or utricular glands. Microscopically, the glands lined by the ciliated epithelium can be seen traversing in an oblique direction from the free surface toward the underlying muscular fibres, at which point they terminate. The glands usually bifurcate at their endings, and two may have a common opening upon the free surface. The most internal muscular layer, termed the muscularis mucosæ, sends up prolongations between the glandular structure. Round and spindle-shaped cells are characteristic of the connective tissue in which the glands are imbedded, the former being most abundant near the surface, the latter lying considerably deeper.

The mucous membrane lining the cervical canal from os internum to os externum is, as with that of the body, very closely adherent, but it is somewhat thinner and wrinkled and covered by ciliated epithelium, formed of a sub-stratum "analogous to that of the mucous membrane of the body, and in which embryonic elements, such as the fibro-plastic fusiform bodies, predominate." It is also furnished with numerous racemose glands, according to Sappey, which emit an abundant secretion of tenacious mucus, having two to three branched extremities, which frequently terminate in cul-de-sacs.

The essential part of the female generative system is that in which the ova, or eggs, are formed; the other organs are merely accessory, and are not even to be found in a large proportion of the animal kingdom. Indeed, in many of the lower animals, the ovary simply consists of a loose tissue containing many cellular elements, in which the ova are formed and from which they escape by these same cell walls rupturing. Again, the resemblance in many of this order of animals between the ovaria and testes is great, so that they can scarcely be distinguished, and the same may be said of these organs in the human species in the earliest periods of their development.

In all the vertebræ the ovum is produced within a follicle or capsule of its own, the exterior of which lies in contact with the connective tissue of the ovary. This sac or follicle in the mammalia was named after its discoverer, Dr. Graaf, the "Graafian follicle," or "vesicle," as long ago as 1673. But the term "ovisac," as given to it by Dr. Barry, who has shown that it exists in other classes of vertebrata as well, seems a much more appropriate designation. According to Bischoff, Valentine, and others, it appears that, the ovisac being pre-formed, the ovum is developed in its interior; in other words, it is a "vesicle of evolution" for the latter. In a similar way do the gland cells of the testis act as vesicles of evolution for the spermatozoa in the male.

The origin and development of these ovisacs commences very early in life. In the ovaries of some animals they can be detected almost as soon as these organs are themselves evolved, and in all they present themselves soon after birth. Indeed, it was clearly demonstrated many years ago that well-developed ovisacs could occasionally be noticed in the matured fœtus. Ritchie, in his work on "Ovarian Physiology and Pathology," clearly proves the existence of such ovisacs in the ovaries of the newly born, and speaks of them as being highly vascular and even filled with granular contents. Others have noticed similar conditions, and Hausmann estimates in eighty-four examinations the result equal to so large a number as ten per cent. Confirmation of such facts is not wanting, as shown by the writings of Slavjansky, Grohe and Sinéty. From the earliest periods of life a continual change seems to exhibit itself in the ovary, for it is proven beyond a doubt that many of the ovisacs forming, or growing, or developing, in the ovary eventually mature and rupture, even during the period of childhood, and this, too, when no menstrual flux had been observed.

From the statements just made, then, it would certainly appear that the function of ovulation is performed *before puberty*, and is a valuable argument in support of the view that menstruation and *it* are wholly distinct and separate processes. To cite another fact which is of no little interest, we are aware that conception frequently takes place when there is no appearance of the catamenial flow, but such a condition would be impossible were ovulation altogether absent. To quote from a most interesting and instructive paper on this subject in the *Journal of the American Medical Association*, Vol. III., No. 14, by A. Reeves Jackson, this author states that "our literature contains many instances of girls who have become pregnant prior to the first appearance of the flow; of women who have conceived subsequently to the menopause, and of others in whom pregnancy has occurred during lactation before the reappearance of menstruation." Rondélet cites an instance of a woman who was delivered twelve times, and Joubert mentions another who bore eighteen children, neither of the women *ever* having menstruated. In "Leischman's Midwifery" may be found the recital of a case where a woman was married early in life and went through eight successive labors at different periods without ever menstruating in all that time, and the first flow only took place after her eighth labor. A most interesting case is published by Gregory in the *American Journal of Medical Sciences*, Vol. XXV., where the woman became the mother of seven children during her married life, and who at no time, either before or during this period, had menstruated. She had always considered herself quite healthy and well, and never experienced the usual sensations which precede or follow the catamenia.

The above cases are only a few of many that might be mentioned. Of course, as Jackson states in his admirable article, objections may be urged that in many of the cases menstruation might have taken place had it not been prevented by conception, but such an objection will hardly hold when it is stated that in another class of cases follicles, or ovisacs, have been found formed and ruptured with their corpora lutea plainly visible embedded in the ovaries of women already in the pregnant state. Two forcible illustrations of such cases will serve our purpose of exemplification, one coming from the pen of Slavjansky, in the *Annals de Gynĕcologie*, February, 1878, the other by Sinéty, reported to the Biological Society of Paris, in 1874, though the latter (made up of two cases reported at different times) really were not pregnant cases. Slavjansky's case was that of a young woman, 24 years old, who died from a rupture of the left Fallopian tube while in the pregnant condition three and a half months, and extra-uterine in its character. There had been no evidence of menstruation during her pregnant state. "The right ovary contained a recent true corpus luteum, with all the characteristics strongly marked. Near it was a maturing Graafian follicle. In the left was a cavity, the walls of which corresponded to those of a ripe Graafian follicle. A small prominence was noticed near the thinnest portion of the wall. It was removed on the point of a needle and found to consist of a mass of epithelial cells, in the midst of which was an ovule. Hence, it was clearly not a cystic degeneration, but a ripe Graafian follicle ready to burst." In Sinéty's cases, the first was that of a phthisical woman who had ceased to menstruate for four months. One ovary contained a ruptured Graafian ovisac. In the second case the woman had *never* menstruated. At 38 she died, and on post-mortem examination it was found that the uterus externally was of normal size, but the cavity was formed almost entirely by that of the neck; the cavity of the body was infantile, as was likewise the mucous membrane. Ovulation had been very active, the ovaries presenting many false corpora lutea." This woman had from her tenth year presented all the features of external maturity, with the exception of the absence of any menstrual flux.

Another factor which may be added to those already mentioned as arguments against the view that ovulation and menstruation are in inseparable relation is that the former function is by no means a *periodic* one, as the latter seems to be. Indeed, from what has been already stated, it would seem that ovulation is liable to be extremely irregular; that is, that ovisacs mature and rupture at odd times and more or less constantly, irrespective of the menstrual flow, which, according to all observers, physiologically and normally usually takes place with the nicest regularity.

Again, it is almost universally stated by most physiologists and students of this particular branch of medical science that with the onset of the menopause *both* ovulation and menstruation cease, and with them the procreative powers of the woman, as, no doubt, would be the result were *both* functions to be absolutely suspended. But that this is by no means a necessity may be shown, Ritchie and others having proven that the formation of perfect ova continues, with rupturing of the ovisacs, long after the cessation of the menses, and Tait remarks, in his excellent work on "Diseases of the Ovaries," 1883, page 33, that he has seen "in ovaries of very old women structures that were in nowise different from those to be noticed in women at the prime of life. To quote from his work, he remarks: "It is quite certain that the growth of ova persists till the end of life, though with advancing years it gets feebler, the cells become less numerous and less mature. The ovaries, however, continue to be the seat of cell growth, and pathological cysts are formed in them, sometimes even at very extreme old age, at a time when operative interference becomes hopeless on account of the age of the patient. The general atrophy which accompanies senility affects, of course, the ovaries, and later in life they are usually small and shrivelled, abundantly marked by scars, and having all the appearances of having been worked out. But even then they exhibit traces of all their old products, and I have seen an ovary from the body of a woman nearly seventy years of age which it would have been impossible to say might not have been removed from the body of a woman of thirty. The changes which are most apparent are those effected in the uterus and tubes. These structures rapidly diminish in size, and the tubes are straightened and cease their movements. Here we have further proof that ovulation and menstruation are wholly independent—that menstruation is not dependent on the ovaries or on ovulation."

From the above, then, it would certainly seem to the writer that the function of ovulation can be performed without relation to the menstrual nisus.

The question which will next engage our attention is whether menstruation can take place without relation to the rupture of ovisacs in the ovary, or ovulation, or without the presence of the ovaries. That the menstrual flow may take place without ovulation is evident from the fact that many instances are recorded where no change has been observed in either ovary in women who have died during the menstrual nisus. Jackson has had the opportunity of examining the ovaries in three such cases, and in none of them was there evidence of recent rupture of ovisacs. Gerhard presented to the College of Philadelphia the uterus and appendages removed from a woman 25 years of age and multiparous, who died suddenly from cerebral hemorrhage while menstruating. In this case, also, the ovaries gave evidence of no recent ripening or rupture of follicles. M. De Sinéty reports a case of hysterical hæmianæsthesia with pain in ovarian region on same side. "Histological examination showed that there was not a single Graafian follicle arrived at maturity, nor were there any corpora lutea or cicatrices in either ovary. It was evident that no ovules had been expelled from the ovaries for a considerable time. It was, in fact, a case of menstruation without ovulation." Leopold, in the *Archiv. f. Gynäkologie*, Bd. XXI., Heft 3, 1883, states that he has examined as many as thirty-two pairs of ovaries removed from women whose last date of menstruation was positively known; the post-menstrual period varied all the way from one day to five weeks. From his observations it is clearly proven that Graafian follicles may rupture at any time without relation to menstruation, and that, therefore, there is no necessary connection between the two functions.

It would seem to us that a question of this nature can best and *only* be solved after a thoroughly comprehensive idea is gained of what menstruation really means; and when once such a knowledge *is* attained, we think that the inquiry as to its relation to ovulation may be brought clearly to light.

According to the older writers, this function was explained as simply a periodical discharge of blood from highly-congested uterine capillaries, which invariably was induced by general congestion of the other generative organs. Of it Whitehead thus speaks in his work on "Abortion and Sterility," page 37: "The catamenial discharge, as it issues from the uterus, appears to be nearly or quite identical with ordinary blood, but in its passage through the vagina it becomes mixed with acid mucus exuded from its walls, which usually deprives it of the power of coagulating. In cases in which, by the death of women at this period, an opportunity has been afforded for the examination of the lining membrane of the uterus during menstruation, it is found to be unusually turgid with blood, the veins in particular being much distended and opening upon the internal surface by capillary orifices, to which valvules are occasionally found attached. Hence, it is scarcely correct to designate the menstrual flux as a 'secretion,' although there is reason to think that it may carry off, besides blood, certain matters which would be appropriate to the formation of a decidual membrane, but which, if not so employed, become excrementitious."

Flint states in his work on Physiology, Vol. V., page 305, that "the mechanism of the hemorrhage" [presuming that it comes from the body of the uterus] "is probably the same as in epistaxis. There is a rupture of small blood-vessels, probably small capillaries, and blood is thus exuded from the entire surface of the membrane lining the uterus, and sometimes from the membrane lining the Fallopian tubes."

Dalton says ("Human Physiology," 7th edition, 1882): "The blood which escapes during the menstrual flow is supplied by the uterine mucous membrane. After death during menstruation, the internal surface of the uterus is found smeared with a sanguineous fluid, which may be traced through the uterine cervix into the vagina. The Fallopian tubes are sometimes congested and filled with a similar discharge." "It is discharged by a kind of capillary hemorrhage, and as a rule does not form a visible coagulum, owing to its being exuded from many minute points and mingled with mucus." "Its discharge is, at the same time, the consequence and the natural termination of the uterine congestion."

The processes which go on during menstruation, according to Hermann, are in many respects obscure. According to him, "no sufficient explanation has yet been given of the cause of the maturation of the follicles, nor of its relation to the external hemorrhage," etc. "The discovery of specially arranged unstriped muscular fibres in the fold of the peritoneum which support the uterus, the Fallopian tubes and the ovaries (Rouget) appears to offer an explanation for the majority of the phenomena. These muscular fibres must, in the first place, bring about the apposition of the tubes to the ovary, and, in the second place, by compressing the venous trunks, lead to a stasis of blood in the organs of generation. The consequence of this must be to cause a kind of erection in the vessels, the structure of which is similar to that of the corpora cavernosa, leading to a hemorrhage within the uterus."

With regard to this subject the following may be found in Dunglison's Medical Dictionary, 1874: "Much dispute has existed as to whether the catamenial flow is a hemorrhage or a secretion. It is both. Prior to the escape of blood from the uterine vessels, the mucous discharge is evidently a secretion, and the same after the hemorrhage or admixture of blood has ceased.

With Bernutz and Goupiel the separation of the catamenial discharge from the uterine glands and vessels means *menstrual secretion*, and when it escapes from the vagina they term it an excretion.

Courty, in his work on "Diseases of the Uterus," 3d edition, London, 1882, thus describes this function: "Menstruation is a flow of blood from the uterine cavity in an intermittent manner, generally at regular intervals."

The source of the menstrual flow is from the uterus, according to Haller. Likewise Barnes, in his work on "Diseases of Women," London, 1878, recognizes a similar origin. "Observations in point have been made under two different conditions; that is, in the living and in the dead." First, in complete prolapsus, and where there was no such condition, by the aid of the speculum, blood was seen to ooze from the os uteri externum, and in cases of inverted uteri the menstrual blood was noticed coming directly from the mucous membrane lining the cavity of the body of the uterus. Second, in examining the uteri of women who had died while in the act of menstruating, Coste and others, including Barnes, have seen the vascular supply developed and injected most extraordinarily. "The vascular structure of the mucous membrane, in particular, forms on the surface, under the fine layer of epithelium which covers it, a beautiful network, each mesh of which encloses a glandular tube." "According to all probability, it is through the walls of these ramuscules that the menstrual blood oozes. The Fallopian tubes, as well as the ovaries, according to this writer, are involved in this intense vascular engorgement, and there is no doubt that blood is effused from the whole tract of the tubo-uterine mucous membrane."

The definition of Hart and Barbour, in their Gynecological work, to be found in Wood's Library, Vol. I., 1883, is that menstruation is "a periodical flow of blood from the uterine cavity, with shedding of the superficial layers of its mucous membrane, accompanying the discharge of an ovum from the ovary, occurring in properly developed women between the ages of 14 and 44, and interrupted by utero-gestation and lactation."

Almost all observers, with possibly the exception of Mr. Lawson Tait, are agreed that the mucous membrane of the uterine body, and possibly that of the cervical canal, is the source of the menstrual discharge. Mr. Tait, on the contrary, believes that it is the *mucous membrane of the Fallopian tubes* which plays the most important rôle in this particular function.

Among those who have latterly given much time to the study of this most important subject may be mentioned Kundrat, Engleman, Williams, Leopold and Möricke.

Kundrat and Engleman maintain that only the superficial layer of the uterine mucous membrane is shed at each menstrual period, and thus describe the change: "The mucous membrane at first becomes swollen and soft, the most marked thickness being at the fundal and central portions; glands are distinctly seen as fine spirals. This increased thickness is due probably to a proliferation of the round cells of the stroma, with a development of all the more superficial cellular elements and an increase of the inter-cellular substance. The glands are thickened and lengthened, the blood-vessels also becoming enlarged and engorged. These changes begin with the onset of the function, and are at their highest when it is declining, likewise as the menstrual nisus passes off. Degeneration of a fatty character, takes place in the inter-glandular tissue, glandular and surface epithelium, as well as in the blood-vessels."

John Williams holds that the essentials in the process are (1) the entire removal of the uterine mucous membrane during the menstrual act, with (2) its regeneration from the muscular coat. His views, in condensed form, may be thus expressed: By uterine contraction the blood is driven from the muscular tissues into the mucous membrane; the vessels of this membrane, having undergone fatty degeneration, give way, and extravasation of blood results; this takes place always most superficially in the membrane, for it is at this point that the fatty changes in the vessels first begin and are most largely developed. With the sudden engorgement of the vessels of the mucous membrane, the glandular contents, together with their lining epithelium, become expelled. When hemorrhage has taken place into the membrane, it (the membrane) rapidly undergoes degeneration, becoming entirely removed in time. The new mucous membrane "is produced by proliferation of the elements of the muscular wall of the organ, the muscular fibres producing the fusiform cells, the connective tissue, the round cells, and the groups of round cells in the meshes formed by the muscular bundles—the glandular epithelium."

Leopold does not believe that the superficial layers of the mucous membrane undergo any fatty degenerations. His view is that an extravasation of blood from the superficial capillaries takes place, especially those in the more superficial areas of the mucous membrane, and that they undermine the uppermost layers of cells; finally there is rupture of the capillaries, as the function increases, from great arterial engorgement. He regards the regeneration of the membrane as an "upward growth of the glandular epithelium."

Möricke recently asserted that during menstruation no mucous membrane whatever is removed; but in all probability the results, as obtained by his observations, combined with the peculiar methods employed in the investigations, are not tenable.

That there is certainly degenerative change taking place in the uterine mucous membrane during menstruation there can be but little doubt, we think, as the weight of authority seems now almost wholly to take that view; and possibly, also, to add something toward the proof that such might be the case, we took occasion to make thermometrical observations of the uterine cavity, to ascertain whether or not there was any marked variation in the internal heat of the same at the menstrual nisus, and if such variations were the case, to note particularly the difference in the heat range *then* as compared with the temperature of the same cavity taken just before and after such periods. The result is set forth below as observed in thirty cases, twelve of which were minutely taken for me and observed by Drs. Flinn and Melick of the house staff of St. Peter's Hospital, and proves, as may be noticed, at least in the majority of these few cases, that the thermometer range was always *lower during* *the invasion* of the menstrual function than either before or after this period. Cases XXV., XXVII., XXVIII., XXIX. and XXX. are incomplete.

CASES.	BEFORE MENSTRUATION.	DURING MENSTRUATION.	AFTER MENSTRUATION.
Case I., M. B.	100 3-5°	98 3-5°	100 4-5°
" II., J. H.	100°	98 2-5°	100 3-5°
" III., E. B.	100 3-5°	99°	100 4-5°
" IV., H. S.	100 3-5°	98 5-10°	100 2-5°
" *V., K. D., Pathological.	100 4-5°	100°	101°
" VI., S. C	101°	98 5-10°	100 3-4°
" VII., J. D. M.	100 3-5°	99°	100 4-5°
" VIII..	101°	98 1-2°	100 3-5°
" IX...	102°	99 1-2°	101°
" X...	100 3-5°	98 1-2°	100 4-5°
" XI	100 5-10°	98°	100 3-5°
" XII	100 5-10°	98 4-5°	101°
" XIII	100 3-5°	98 2-5°	100°
" *XIV., Pathological	101°	99 1-2°	100 2-5°
" XV.	100 4-5°	98 2-5°	100 3-5°
" XVI.	100°	98 4-5°	100 2-5°
" XVII	100 3-5°	98 3-5°	101°
" *XVIII., Pathological	101°	99 2-5°	102°
" *XIX., Pathological.	101 2-5°	100 2-5°	102 1-5°
" XX	100 3-5°	99°	100 2-5°
" XXI., N. K., aged 19	Three days before menses, 100 3-5°	99°	Not taken.
" XXII., S. H.	Two weeks before menses, 100 2-5°	99 2-5°	" "
" XXIII., M. McM.	Just before menses, 99 4-5°	Not taken.	" "
" XXIV., J. B.	One week before menses, 99 3-5°	98 3-5°	100°
" XXV., M. S.	......	......	A day after menstruation began 98 4-5°
" XXVI., M. L.	One day before menses began, 100°	98 2-5°	99 9-10°
" XXVII., M. D.	......	98 1-2°	Five days after, 99 1-5°
" XXVIII	......	98 2-10°	100 1-5°
" XXIX.	......	98 3-10°	Two weeks after, 99 3-5°
" XXX., M. K.	......	98 3-10°	One week after, 100°; two weeks after, 99 2-5°

* These cases had pathological conditions well marked.

In all the above cases the thermometer was passed *beyond* the internal os, and held in position never less than five minutes. The thermometer which we present was the one used in each case, and was made expressly for us. It will be noticed that it has an angle in it about two inches from its bulb, for the purpose of its easy passage in cases of uterine angular curvatures.

Now, to us such a marked lowering of the animal heat indicates the loss of the same by radiation and conduction from what might be called an inanimate substance or tissue, represented in this case by the fatty, degenerated and exfoliating mucous membrane, no longer connected by any close blood relation with the uterine body, and therefore being destitute of whole vessels engorged with warm blood from the deeper parts. Its vitality and life gone, already arrived at a degenerated and useless state, it is swept away as detritus by the now encouraged menstrual tide.

Tait's view, that the monthly molimen from the uterus is due to the monthly movement of the Fallopian tubes, with characteristic changes in them, is, we think, untenable, as removal of the tubes, as well as the ovaries, in abdominal section, does not *always* do away with the periodical uterine discharge. It has been observed by many that a sanguineous flow sometimes occurs per vaginam, in exceptional cases, after double ovariotomy. Such cases, for example, are those of Dr. W. L. Atlee, H. R. Storer (*American Journal of Medical Sciences*, January, 1866, page 110), *Canada Medical Journal*, 1868, *American Journal of Medical Sciences*, January, 1868. Cases are also reported by Baker Brown, Le Fort, Koeberlé, Charles Clay, Jackson, Jenks, Verneuiel and Terrier (*Annals de Gynécologie*, 1877), M. de Sinéty, Billroth, and Campbell, of Augusta, Ga., beside many others. This last gentleman read a paper on the subject of "Menstruation after the Extirpation of the Ovaries" before the American Gynecological Society, September 18, 1883. His views were (1) that the ovaries influenced the function of menstruation. (2) The ovaries, unquestionably, are the ordinary excitors of this function; but are they the only excitors to activity in the genital organs? Certain cases are then cited where menstruation, lactation, etc., had been excited by irritation at some remote point, as from parotiditis, suckling in the unimpregnated woman, etc. (3) These cases, he thought, showed that certain influences acting through the nervous system were efficient agents in establishing ovarian and uterine action. "Pain follows amputation, not in the stump, but in some part of the portion amputated, and because the nerve center has been adjusted and adapted to originating such a sensation, may not periodical congestion and revival of the function of menstruation be the result of an original endowment of the nervous system continued for a time, although the organs which are ordinarily the excitors have been removed?"

In the discussion which followed, Dr. Goodell, of Philadelphia, was disposed to accept the view that the uterine hemorrhage, after removal of both ovaries, might depend occasionally upon irritation of some nervous center. "He had not removed both ovaries without forced menstruation appearing within the first *five* days, and he attributed this to irritation set up by enclosed nerves."

Dr. Garrigues, of New York, spoke of the possibility in these cases of there being a third ovary present which was left behind. One exceedingly interesting recorded case he could recall, where, after removal of two ovaries, the woman bore a child.

Dr. T. G. Thomas, of New York, said that he had removed both ovaries between fifty and sixty times, had followed the cases so far as possible, and his impression was that when the ovaries are present menstruation is the rule, and after their removal this function is the exception. He regarded the bloody discharge which occurs after the removal of the ovaries as a metrostaxis. He did not believe that the Fallopian tubes had any thing to do with the excitation of menstruation, and with its performance they were undoubtedly concerned. He had had but one case in which there was a paroxysmal discharge of blood from the uterus after removal of both ovaries. There were no regular intervals, as twenty-eight days, between the times of discharge in this case, and neither were there any of the regular symptoms of menstruation.

In this discussion we think that Dr. Thomas has brought in a happy term in applying the word "metrostaxis" to the bloody discharge coming from the uterus after a double ovariotomy; for, if we define menstruation to be the sanguineons flow produced by, or coexisting with, ovulation, of course such a term here would become inadmissible or inapplicable, since, with the absence of the ovaries, ovulation is an impossibility. As we have shown that ovulation is not the necessary cause of menstruation, this latter function may be regarded as an incidental rather than an essential one. Considered in itself, it represents merely a flow of blood from the uterus and tubes at stated periods, with fatty degeneration and exfoliation of the mucous membrane, irrespective of its connections or causation.

Now, recognizing metrostaxis as nothing more nor less than a uterine epistaxis, can we say that it and menstruation, as we comprehend the term, are one and the same process? In metrostaxis after double ovariotomy, is there fatty degeneration and exfoliation of the uterine membrane? This, we are sure, has never as yet been ascertained; and, again, metrostaxis has occurred from the smallest part of the cervix uteri being left as a stump after removal of not only the ovaries, but also the Fallopian tubes and whole body of the uterus. If this be so, then, there certainly can remain no mucous membrane of the body of the uterus or tubes to undergo physiological changes, and, therefore, the discharge of blood in such cases must be entirely different, physiologically considered, from that which we recognize as true menstruation.

To summarize briefly, then, we would consider—

First. That ovulation does occur independent of menstruation.

Second. That menstruation can occur independent of ovulation.

Third. That the flow, after complete extirpation of both ovaries and tubes, is a metrostaxis, and not menstruation, as we now comprehend that term.

REMARKS UPON PERI-UTERINE CELLULITIS AND PERI-UTERINE PERITONITIS.*

BY H. T. HANKS, M.D., NEW YORK.
Albany Medical College, 1861.

I wish to speak of peri-uterine inflammations, a class of diseases which have specially interested me during the last fourteen years; and, with the experience which comes from a somewhat extensive practice, I shall call your attention afresh to their importance, and, I trust, succeed in interesting you.

I shall not enter into an elaborate and careful study of the *history* or *pathology* of peri-metric inflammations, but shall rather speak of the present knowledge we possess of the diagnosis, prognosis and treatment of peri-uterine peritonitis and peri-uterine cellulitis. By the term "peri-uterine" I refer to those diseases which occur in the peritoneum and cellular tissue which surrounds and lies adjacent to the uterus, and which are by some authors classified under the heads of †"Peri-Metritis" and "Para-Metritis," by other authors as ‡"Pelvic Peritonitis" and "Pelvic Cellulitis."

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*President's Address before the Alumni Association of the Albany Medical College, March 4, 1885.

†Virchow, Mathew Duncan, Bernutz, Tilt, Lusk and others.

‡Thomas, Emmet, Brown, Grailly Hewitt, Priestly.

For myself, I doubt the possibility of properly or correctly expressing the difference of these two diseases by the use of the two Greek prefixes, *peri* and *para*. As the former, *peri*, means "about, on all sides of," and "round about," conveying the idea of completeness; while the latter, *para*, means "by" or "near by," "adjacent to," "along-side of." It is seen at once that the distinctions, or differences, between these two prefixes are insufficient to express the important differences of the diseases, besides being too similar in sound. And, moreover, the prefix, *peri*, covers and includes the meaning of *para* when applied to these diseases. I shall, therefore, use the terms which are used by many good authorities, and which mean to me exactly what the words express, and cause no confusion of ideas by similarity of sound.

By "peri-uterine peritonitis" I mean the inflammation of that portion of the peritoneum which covers the fundus uteri and the bladder, forms the broad ligaments, and dips down between the uterus and rectum to form Douglas' pouch. By "peri-uterine cellulitis" I mean the inflammation of any portion of the cellular tissues below the peritoneum, around the cervix and vagina, under the broad ligaments, between the bladder and uterus, between the uterus and rectum, and between the vagina and rectum. This tissue, termed by some the "padding" of the pelvic organs, is the bed of numerous blood-vessels and nerves; and by its remarkable capacity of expansion and contraction is peculiarly well adapted for the purposes of support to the pelvic organs, and is susceptible to inflammations from various causes, either septic or traumatic. These diseases of the female pelvic organs are far more common than many of us have formerly supposed. Frequently I am called in consultation to see one or two such cases in a day. I judge that my experience is similar to that of other physicians. At the Woman's Hospital nearly one-half of all the patients who are admitted for minor operations, and many of those for major operations, are obliged to be placed under preliminary treatment, for from two to twelve weeks, for some existing form of peri metric inflammation. Dr. Emmet[*] says: "I do not exaggerate when I claim that this disease" [meaning chronic cellulitis and peritonitis] "is by far the most important one with which woman is afflicted. It is the most common, and becomes the most important in being *comparatively seldom recognized.*"

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[*] Emmet's Gynecology, p. 256.

I have selected this subject to-day because I feel that my experience may help those who have had less, to discover these inflammations, and institute measures for their diagnosis and cure.

Anatomy.—The peritoneum, which forms the floor of the abdominal cavity, of course constitutes the roof of the pelvic cavity. It can best be understood, by one who has not examined these parts in the dead-house, by supposing the peritoneum to be stretched loosely across from the pubes to the junction of the second and third bone of the sacrum. It covers the fundus of the bladder and the fundus and the anterior face of the body of the uterus, nearly down to the vaginal junction, and, spreading from the fundus on either side, constitutes the broad ligaments, while the posterior face of the uterus is covered still further down than on the anterior face—much further than the plate we formerly studied represented. It then passes upward and forms the Douglas' cul-de-sac; then, with thickened folds, it passes on either side of the rectum to its attachment to the sacrum, as mentioned above. These thickened folds constitute the utero-sacro ligaments. Some fibres of this portion of the peritoneum, in this locality, are attached to the anterior wall of the rectum; the remainder pass on either side of the rectum, and are attached to the sacrum as mentioned above. The arteries which supply blood to the pelvic organs are the hypogastric, uterine, vesical and pudendal. They are very numerous, especially near the uterus and under the folds of the broad ligaments, and they anastomose freely, so that the supply of blood is always abundant. The veins are large, tortuous and abundant, and without valves. There is a close anastomosis of the veins of the uterus, broad ligaments, bladder, rectum and pudendum. This explains the intimate sympathy and relation one organ bears to another when diseased, and also how quickly the uterine and adjacent cellular tissue become engorged and congested with blood from constipation and sedentary habits. And we can realize the effect of this intimate anastomosis of veins and arteries when we remember how quickly these congested organs are often relieved by a brisk cathartic. The lymphatics and nerves, too, are equally abundant, with perhaps the exception of the distribution of the nerves around the cervix, where they are found less numerous.

By peri-uterine cellulitis we mean an inflammation of the cellular tissue immediately adjacent to the uterus. Graily Hewitt defines it as "an effusion of morbid products into the space surrounding the uterus, * * underneath the ovaries and broad ligaments." Its actual seat is the cellular tissue surrounding the uterus, between the folds of the broad ligaments, and extending from the uterus towards the pelvic wall in various directions. It may be general, or as is often the case, quite local, involving the tissue near the cervix, to the left or right, and, when chronic, only indicated by a sense of induration and thickening of the tissues in this locality. It may be back of the vagina, in front of rectum, and constitute a well-marked, circumscribed phlegmon, movable, tender, throbbing from the pulsations of the numerous small arteries tightly fixed in its meshes. It may be situated still further down, involving the cellular tissue in the perineum. In such cases we find a swelling, attended with great pain, throbbing induration and heat in this locality, as is always present before an abscess forms here. Such an abscess, opening through the perineum, generally becomes a fistula in ano; when it ruptures into the vagina, it generally forms a recto-vaginal fistula. We have all seen such results. Sometimes this cellulitis is in the tissue immediately surrounding the cervix uteri; and then there may be so much effusion as to crowd the vagina downwards towards the plane corresponding to the *os externum*, thus creating a suspicion that there is no little, or *vaginal*, cervix.

The disease is more common on the left than on the right side, due undoubtedly to the facts (1) that the circulation is more free on this side; (2) the rectum being situated here, the parts are more frequently disturbed by the passage of hardened fæcal matter.

Graily Hewitt thinks that the larger part of his metric inflammations are outside the peritoneum. Other authors believe the peritoneum is almost always involved whenever the cellulitis is above the floor of the vagina.

The causes of peri-uterine cellulitis may be, and are, very varied. The most common are great exposure and sudden colds during menstruation, over-work or exercise during menstruation, sexual indulgences while congestion from menstruation or from a lacerated cervix exists, any violent or sudden emotion or exertion during the menstrual flow, the absorption of septic matter from any source.

Grailly Hewitt, Schroeder and Matthews Duncan consider this disease as more frequently than otherwise a post-puerperal *condition.* The irritation of unsuitable pessaries may constitute another cause. Criminal abortion, with its attending train of unnatural results, is another cause.

One thing, in this connection, it is well for us all to remember, viz., that from a *very insignificant cause* may arise an extensive peri-uterine cellulitis, extending into peri-uterine peritonitis, then general peritonitis and death.

The *initial symptoms* of *peri-uterine cellulitis* are almost invariably a chill, with its succeeding fever. Then follows pain and tenderness in the region of the inflammation. Frequently the disease is ushered in with only a chilly sensation, attended with nausea and vomiting. There is generally dysuria and a frequent desire to pass urine; then there will be painful defecation, general distress and weighty sensation in the loins, sometimes with retraction of thighs, especially when the inflammation is near the iliac and psoas muscles, and suppuration is imminent. The temperature will be increased, often reaching at first 104° to 105°. The pulse is correspondingly accelerated, and will range from 110 to 140. There will be tenderness of the abdomen, and frequently the weight of the clothes is insupportable. These symptoms are far more marked and positive when the cellulitis has become extensive, involving the pelvic peritoneum. On examination, per vaginam, the patient lying upon her back, we find in the acute stage an exquisitely sensitive condition of the parts, a sense of increased heat, and a certain baggy condition, which is quite unnatural and quite characteristic of the beginning of effusion. However, the knowledge to be gained by the sense of touch will vary greatly, according to the stage of the disease. In its more chronic form it can *only* be determined by a physical examination, and will then be recognized by the sense of fullness and induration, and more or less fixation of adjacent tissue.

Diagnosis.—The diagnosis is usually made by obtaining first all the subjective symptoms possible from the patient's history of her case. If she has had a chill, or has vomited, or has tenesmus without diarrhœa, or strangury, or excessive pain in pelvis, or complains of great heat in this region, and other symptoms which I have already described exist, a careful vaginal examination is indicated and should be made. The index finger of either hand, thoroughly disinfected and anointed, may be carefully introduced into the vagina, and will discover the amount of tenderness existing, and any induration or swelling of the cellular tissue around the uterus, around the cervix and below the broad ligaments. The swelling will be hot and tender, sometimes quite movable, sometimes fixing the uterus or crowding it from the median line. This swelling may be doughy, œdematous or fluctuating. The physician who would correctly diagnosticate this disease must bear in mind that in health the vagina is elastic and normal in temperature, and that no indurated tissue exists; also that in health the uterus is perfectly and painlessly movable. If all these symptoms of the disease be revealed by the vaginal examination, and we find the pelvic roof *not* indurated nor affected, we have the strongest evidence that the disease is *cellulitis.*

Differential Diagnosis.—There are, however, certain other diseases and conditions which may be mistaken for cellulitis. Among these is extra-peritoneal pelvic hematocele. To differentiate these two diseases, it must be remembered that the latter, hematocele, is usually much more sudden in its onset, is attended with a greater shock to the patient, often causing faintness; the induration is less painful to the touch and more circumscribed; is attended with less fever, until a certain amount of cellulitis is set up around the escaped blood. When this condition exists, we cannot, with certainty, differentiate a common cellulitis from a cellulitis surrounding an hematocole. In these cases the bleeding is seldom so excessive or alarming, as the blood has to dissect for itself the circumscribed cavity which is to inclose the blood and constitute the hematocele. Therefore, it is of no material consequence, at this stage, if we are *not* able to determine whether the cellulitis envelopes an hematocele or not, as we have to treat the two conditions exactly the same. One other condition may be taken for a peri-uterine cellulitis, and this mistake is an exceedingly mortifying error of diagnosis, but one which has often occurred. Two different patients were sent to me by two different physicians for treatment for a phlegmon in the posterior vaginal wall. A rectal examination proved the large, hard, circumscribed phlegmon, in both cases, to be only impacted fæces, amenable to treatment with saline cathartics. Impacted fæces need never be mistaken for peri-uterine cellulitis, if a thorough *rectal* examination be made, which should *always be done whenever any possibility of error exists.*

Uterine retroversion, or flexion, may be mistaken for cellulitis. These conditions can easily be appreciated and differentiated. If a sound can be introduced into the uterine cavity, it determines at once the position of the organ. If, after careful efforts at reduction, the patient being in the knee-chest position, the tumor still remains unchanged, then there is, together with retroversion, a peritonitis or cellulitis in this locality, which requires, and *must* have, the usual treatment before the displaced organ will assume its normal position.

Prognosis.—In no other class of diseases is there more fault-finding with the physician in charge than in these same pelvic inflammations, and the cause of the patient's distrust of the physician's ability is due, in great part, to his *errors* in prognosis. An exact diagnosis and an appreciation of the pathological conditions will enable the physician to render a more nearly exact prognosis. He must know *positively*, by careful examination, the *exact* locality of the phlegmon; whether it be a circumscribed cellulitis, and its limitations; if it be entirely *below* the peritoneum; if it be near suppuration; if treatment will hasten resolution or suppuration; and if it will require weeks, or months, for either result. He must remember that these inflammations and indurations of the vagina which seem to be firmly attached to the cervix at the seat of a laceration of this part, or a cellulitis which lies under the folds of the broad ligaments and around the ovary or Fallopian tube, *must* take a much longer time for cure than those which are more remote from the uterus and peritoneum. For there is always a possibility that the periodical congestion of the menstrual period may light up afresh any existing inflammation contiguous to the uterus and ovaries.

Treatment.—Whenever this disease is discovered and recognized, in the first stage of its acute form the patient should be made to assume and remain in the recumbent posture. She should take such laxatives, daily, as will act freely and produce semi-liquid evacuations. She should have frequent and copious vaginal douches of warm water and borax or warm flaxseed tea. If the swelling and pain are excessive, leeches may be applied, as near as possible to the seat of the trouble. Anodynes, to insure sufficient rest, are necessary. Rectal suppositories of opium are useful. Only moderate quantities of easily digestible food should be allowed. When suppuration has taken place, the pus must be afforded an exit at such point as will be easiest and safest, and least likely to remain a fistulous opening. In one case which was admitted to the Woman's Hospital during the month of September, 1884, it was found that an *abscess* which had formed in the *recto-vaginal* space had been opened by incision from the vagina, instead of at a point near the anus. As a consequence a recto-vaginal fistula resulted, which was exceedingly difficult to heal.

The *chronic form* of peri-uterine cellulitis comes most frequently under the treatment of the specialist, for the reason that the acute form is always attended with such grave and positive symptoms that the family physician is summoned, who discovers the disease and continues in attendance while the more alarming symptoms remain. But in the chronic form, which is often found existing around the cervix and underneath the broad ligaments, the family physician often overlooks the source of distress, and endeavors to fit a pessary for some fancied or real displacement or flexion of the uterus; or he proceeds to operate for a slight laceration of cervix, or ruptured perineum, with very unsatisfactory results. The patient, finally discouraged, comes under the care of the experienced gynecologist, and the exact condition is, for the first time, discovered and successfully treated. This chronic form of cellulitis requires less heroic treatment than the acute form, but far more persistent. In the vast majority of cases the general condition of the patient has to be improved. Tonics of Peruvian bark, iodide of iron, mineral acids, etc., are often required, and should be as earnestly insisted upon as any local treatment. The bowels should be moved daily, as in the acute stage. Local treatment, while any induration exists, *is necessary* every third or fourth day, except during the three days preceding the menstrual flow, during the flow, and for two or three subsequent days, to avoid the danger of increasing the accompanying congestion at that time. The local treatment should consist of applications of Churchill's, or the compound, tincture of iodine to the parts near the induration. The patient should also be enjoined to faithfully use vaginal douches, daily, of two and even four quarts of warm water, and also to remain in the recumbent posture for one hour after the douching. After the application of iodine, a pad of cotton, with string attached, soaked with glycerine, or a poultice of flaxseed meal and slippery elm bark, should be applied, and held in place with dry pads of cotton, well packed in the vagina. I use poultices, in preference to the cotton and glycerine pads, in more recent cases, where there is still considerable effusion to be absorbed. In these cases, and especially where some peritonitis exists, besides the cellulitis, I insist upon the patient living separate from her husband and refraining from sexual intercourse for a time. I find that the patients in the Woman's Hospital, as a rule, recover far more rapidly, for this reason, than those who are treated at home, and who are obliged to occupy the same bed with their husbands.

Peri-uterine peritonitis is an inflammation of any part of the pelvic peritoneum. Dr. Emmet doubts if there is ever a perimetric peritonitis *without* considerable cellulitis. One fact should be always remembered, that whenever the cellulitis extends *upwards* there is more or less peritonitis, and when a severe peritonitis extends *downwards* there is more or less cellulitis. An easily remembered and practical rule, but one not literally correct in all cases, is to call all inflammations peri-uterine peritonitis which seem to be *above* a plane drawn from the middle of the pubes to the middle of the third bone of the sacrum.

The causes of peri-uterine peritonitis must be, and are, much the same as those which cause cellulitis, and have been previously enumerated. The puerperal state, of course, is a very frequent cause, and we may find a chronic peritonitis existing for weeks, and months, after parturition. Gonorrhœa, extending from the vagina to the uterus, and through the Fallopian tubes, is another source of the disease; also the rupture of small cysts of the ovaries and Fallopian tubes. Excessive hemorrhage from the Graafian follicles during the menstrual epoch and the escape of some of the blood into the pelvic peritoneal cavity is one cause. Undue traction on the uterus during operations on the cervix has been reported as a cause in several cases. One such case occurred in my own practice. Poisoning by septic matter from imperfectly cleansed sounds or instruments may be one cause. Matthews Duncan thinks that a vast majority of these cases of peri-uterine peritonitis are due to metritis or catarrh of the endometrium or the Fallopian tubes. The latter, salpingitis, with hydro- or pyo-salpinx, is undoubtedly a most fruitful cause, as I have often had opportunity to verify at the autopsy.

Symptoms.—The subjective and many of the objective symptoms of peri-uterine peritonitis are the symptoms of cellulitis, only far more exaggerated and severe. Chill, fever, great local pain, vomiting, dysuria, generally diarrhœa, with tenesmus; excessive tenderness over the supra-pubic region; pain, often distinctly paroxysmal; often retraction of thigh;* local tympanitis. On vaginal examination, the uterus and broad ligaments are found to be fixed and firmly imbedded and surrounded with adventitious exudation, or organized lymph. This plastic exudation into the meshes of the adjacent cellular and peritoneal tissue causes the almost fibrous hardness of the pelvic roof. By rectal examination, the finger, pushed far up, feels the exudation in Douglas' pouch, and, at the same time, touches the thickened and exquisitely sensitive utero-sacral ligaments. There is often great vaginal heat. When Douglas' cul-de-sac is early involved, often the anus and lower rectum are œdematous and swollen. There is also much tendency to neuralgia. The patient invariably desires to remain quiet and upon her back.

Often, however—and this fact I cannot too forcibly emphasize—there is chronic peritonitis, or lurking peritonitis, when *not suspected by the patient*, and only discoverable by the physician on a careful examination.

These chronic peri-uterine inflammations are just severe enough to keep the woman half an invalid, to cause sterility and dyspareunia. They are a constant source of danger in all operations for replacing the uterus or restoring a lacerated cervix, and are a cause of much menstrual disturbance. Suppuration does not occur as often as in peri-uterine cellulitis, but in a vast majority of cases, where cellulitis ends in suppuration, there is more or less peritonitis. There will often be a slight, and sometimes quite considerable, flow of blood, of a venous character, from the uterus. This may last for three or four weeks, and is always present when the endo-metrium and Fallopian tubes are involved, as *is* especially the case in perimetric peritonitis which follows an abortion.

Diagnosis.—In the acute stage of peri-uterine peritonitis, a diagnosis is easily made. In the more chronic stage, of a once severe form, it is less easy to determine the presence of the infiltration and fixation. Where only a slight fixation of the fundus uteri exists, or but a slight thickening of the tissue in the broad ligament is discovered, with but little tenderness, and with only a slight loss of elasticity in the tissue which constitutes the vesico-uterine septum, or only an apparently insignificant thickening and tenderness is found in the region of the utero-sacral ligaments, these conditions are too often overlooked by the physician who has not fully learned their importance as a source of danger when introducing a pessary or using the sound, the scissors or the needle.

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*Dr. Thomas thinks this does not occur in peri-uterine peritonitis, but I have seen two cases where this symptom existed, and was present at the autopsies, which revealed a peri-uterine peritonitis, with but slight cellulitis.

There will generally be, in the first stage of acute peri-uterine peritonitis, the chill, or rigor, followed by fever; often nausea and vomiting; often diarrhœa and tenesmus; dysuria; great abdominal pain in region of fundus of bladder. There will be the facial expression of great suffering and anxiety; the skin will be hot; the abdomen tender and tympanitic. The vaginal touch will reveal fixation, from effusion of plastic lymph, excessive heat and exquisite tenderness in and around the uterus and bladder, varying according to the *stage* at which the examination is made.

The differential diagnosis between peri-uterine peritonitis and cancer of the uterus, or its appendages, is not always easy in the first stage of the latter. But in cancer the pain is more persistent, the onset of the disease is more gradual, but increases from week to week in severity, requiring daily more opium. In peritonitis the pain *diminishes* in severity from week to week. The pain in cancer is more frequently in the sacrum, or Poupart's ligament, or the pudenda, or in the thighs. There is more profuse and alarming hemorrhage, if any, in cancer. There is more infiltration in inguinal glands. There is no hydrorrhœa in peritonitis, while in carcinoma uteri it is generally present. In the later or ulcerative stage of cancer, no mistake of diagnosis need ever be made.

A prolapsed, cystic, hypertrophied *ovary* may be mistaken for chronic peri-uterine peritonitis. But a diseased ovary is generally quite tender, movable and more circumscribed to the touch, and, in thin women, by bi-manual examination, it can be easily detected. Also the periodical pain of the diseased ovary, before menstruation, would indicate its character.

Peri-uterine hematocele can be differentiated from peri-uterine peritonitis in the same manner as from peri-uterine cellulitis.

Prognosis.—The prognosis is good in the majority of cases, but the recovery is slow—much slower than in peri-uterine cellulitis. When the cause of the peritonitis is believed to be inflammation or severe catarrh of the Fallopian tubes, we must expect an occasional recurrence of the disease until the catarrh of the tube is cured or the tube removed. The operation for removal of tube or ovary should be resorted to only after months have been spent in the treatment for the cure of the inflammation, as very many cases *can* be cured and *have* been cured in my own practice. Even Tait states that he has made one error of diagnosis in these cases in *every ten patients.* When pelvic peritonitis is accompanied with more or less cellulitis, the course of the disease is very much slower and the prognosis less favorable.

Treatment.—The treatment of peri-uterine peritonitis, in the acute form, must be decided, or it is likely to run into general peritonitis and become a truly formidable disease to manage. If called early, even before much effusion has taken place, we ought to *suspect* the disease and prepare for it. Morphine, in sufficient quantities to allay all pain, should be adminstered hypodermically. Wet cups, or leeches, or a large fly blister, should be applied. In severe cases I should choose these remedies in the order named. If the temperature is high, I would apply an ice-bag, or ice water, in the coil, allowing it to remain upon the abdomen until the temperature is lowered to 101° at least. I would order opium by the rectum, or camphor and opium pills, *pro-re-nata,* sufficient to cover all pain; also quinine, according to the indications and general strength of the patient, or the malarial type which might be manifested. I would or would not use copious vaginal douches of hot water, according as they seemed alleviating or annoying to the patient. When the temperature is reduced by means of the coil, quinine and opium, a warm flaxseed meal poultice, with oil of turpentine, will be an excellent application to the lower abdomen. When, from severe rigors, followed by perspiration and hectic, suppuration is suspected, it is often a difficult matter to determine where the pus is located. In every case, where any uncertainty exists with reference to localizing the pus, the patient should be anæsthetized and a most careful and thorough examination be instituted. After discovering its locality, it should be removed through the abdominal or vaginal wall, as may seem most judicious at the time. The cavity of the abscess should be frequently cleansed with antiseptic fluids in the usual manner until entirely healed. To prevent closure of the track of the cavity a drainage tube snould be kept in position. When, however, the abscess ruptures spontaneously into the rectum, great difficulty will be experienced in healing the abscess, since the opening into the rectum is generally above the floor of the abscess, and consequently it is never completely emptied, and every effort at defecation stretches the sides of the fistula and abscess and prevents healing. In such a case the patient should be anæsthetized, the index finger should be passed up the rectum as far as possible in the endeavor to find the fistulous opening of the abscess into the rectum. If not successful, a long, narrow-bladed Sims' speculum should be introduced into the rectum, in the same manner as it would be into the vagina, and, aided by the best possible light, search should be made with the eye for the fistulous opening. When discovered, a uterine sound, or strong silver probe bent upon itself, should be introduced into this opening and the direction of the fistula carefully noted. The sound *in situ*, and the index finger introduced into the vagina, should be made to approach each other as nearly as possible. Then, in removing the finger and noting the exact position which it occupied, a thermo- or galvano-cautery or sharp, conical-shaped stillette should be forced through until it touches the wire probe in the rectum. Thus the danger of hemorrhage from the wound is reduced to the minimum. In such a procedure a drainage tube must be kept *in situ* for weeks. If this operation cannot be done, and the patient is losing ground, the abdomen must be opened and the diseased tissue removed in the same manner as an ovarian tumor would be.

Experience has taught us, however, that operative interference in searching for pus, even with the aspirator, is dangerous. Explorative punctures for suspected pus should never be made unless there is almost an absolute certainty of its existence.

The chronic form of peri-uterine peritonitis must be treated like chronic peri-uterine cellulitis. Frequent application of iodine or blisters to the vagina, near the affected locality, may be necessary. Then the poultice or cotton and glycerine pads must be used twice a week for months, together with the daily use of hot water, or hot sea-salt water, or chlorate of potash water, in copious vaginal douches. Warm sitz-baths are also efficacious.

When there is a constant recurrence of this disease, and it is reasonable to suppose it is due to chronic salpingitis and ovaritis, with all their accompanying complications and consequent suffering, *the only* cure is removal of the exciting cause by performing Battey's or Tait's operation.

To recapitulate, in conclusion, I would say that these peri-uterine inflammations are of frequent occurrence. The chronic forms of cellulitis and peritonitis are often overlooked by the general practitioner. The two diseases may exist at the same time, but in the primary stage of either a correct diagnosis can and ought to be made. Operations on the cervix for laceration of the same, careless introduction of sound tnto the canal, or undue force in the reduction of versions or flexions, while either of these diseases is present, are fraught with danger to the patient, and must be avoided. The acute forms of peri-uterine cellulitis and peritonitis require much the same treatment. The former ought always to be cured. The treatment of the latter (chronic peritonitis) may be pursued for months with but little improvement, but it should be persevered in. In the majority of cases the chronic form of peritonitis can be cured without resorting to the capital operation for removing the ovaries, the tubes or the suppurating tissue.

Cold in the head (*Russkaia Meditz,* No. 10, 1884) is treated by Dr. Prokop Popoff, Minusinsk, by bathing the feet and legs in ice-cold water, morning and evening, and rubbing with a towel until dry and warm. The whole procedure takes not more than five minutes.

Choice of Teeth for Extraction for Uniformity.—In 7,277 extractions of diseased teeth, 2,823 were first molars, 737 were first bicuspids, 944 were second bicuspids. Hence, when the choice is between a first molar and a bicuspid, take out the first molar.— *Weekly Med. Rev.*

Cholera.—F. E. McFarland, Hon. Brig. Surg., A. M. D. (*Dublin Jour. Med. Sci.*),was taught by Surg.-Maj. W. A.White, R. A., that thirteen years' experience in India had shown that potas. permang. was the most successful remedy for cholera. Dissolve one grain in four ounces of distilled water; give one teaspoonful every ten minutes, until reaction; then beef-tea, etc. —*St. Louis Med. and. Surg. Jour.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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VOL. VI. APRIL, 1885. NO. 4.

BOOKS, ETC.

A TEXT-BOOK OF HYGIENE; A COMPREHENSIVE TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE FROM AN AMERICAN STANDPOINT. By George H. Rohé, M.D. Thomas & Evans, publishers, Baltimore.

There are probably not many private libraries of medical men which contain works on preventive medicine. This is partly because the subject, like many others of a medico-scientific character at the present time, is comparatively a novel one. It is almost wholly ignored in the medical schools, where the bent of the physician's study is largely given. It is safe to say that there is hardly a school in this country where so much has been laid before its students as during its current course has been given to the students of the Albany Medical College by the Secretary of the State Board of Health, Dr. Alfred L. Carroll, in an exceedingly good course of lectures which he delivered by invitation of the faculty.

Besides the novelty of the subject, stands the fact that works at once comprehensive and American have been wanting. "Buck's Hygiene," a collection of articles by special writers, a work of two large volumes, is the only American contribution to the subject. Wilson's work is comprehensive, and has been the accepted text-book for years, but is English. A foreign author necessarily deals with matters in many respects different from those found at home, a point of less moment, though, with this subject than with others more purely related to disease. Parke's complete work is both exhaustive and of English authorship, and worthily represents a subject for a country that has done more than any other for its development.

Dr. Rohé, who is professor of hygiene, College of Physicians and Surgeons, Baltimore, has given us a book of 324 pages. It is not distinctively American, for it is largely made up of an epitome of the general literature of the subject. As the book is not written apparently for the well-informed sanitarian so much as for the general practitioner who is ill-versed in these matters, this is probably not to be deprecated. The chief objection for this class of readers is the inexactness and lack of detail on some important topics. Thus, in the short chapter on disinfectants, room has not been found for the routine of employing sulphur fumes, and no reference is made to the equally valuable chlorine disinfection. Only a page is given to drainage of soils, with no description of methods, and there is a lack of intelligible detail regarding house drainage. There are many good chapters in the book, such as those on school and industrial hygiene. In spite of a carelessness in construction of the material, it contains much useful information for the novice, and the book will furnish interesting and useful reading to the large body of the profession, to whom this subject, if not a *terra incognita*, is at least one on which our knowledge is exceedingly nebulous.

A book that shall be up to the latest advance in the study of hygiene, and that shall be exactly and carefully written and in no way misleading, included in a moderate space and from an "American standpoint," is very desirable. It cannot be said that this work fills all these indications; still, in many ways it will found valuable, and will answer a purpose until a more perfect one shall be offered.

F. C. CURTIS.

THE DIAPHRAGM AND ITS FUNCTIONS; its Relations to Respiration and the Production of Voice. By J. M. W. Kitchen, M.D. *The Voice* First Prize Essay. Edgar S. Werner, publisher, Albany, N. Y. Flexible cloth, $1.00 net, postpaid.

The anatomical division of the subject treats of the diaphragm's location, general shape, gross composite parts, minute anatomy, relations, embryology and history of development, comparative anatomy and important co-operative structures. The physiological part discusses the function of respiration generally, the action of the respiratory muscles, respiratory action of the diaphragm, control of the diaphragm's action, incidental functions of the diaphragm, change of shape in the trunk during respiration, difference in male and female breathing, certain natural phenomena that occur synchronously with the action of the diaphragm, relation of the circulation of the blood to the action of the diaphragm, actions of the diaphragm resulting from extraordinary causes, the comparative physiology of the diaphragm, and functional development of the organ. Under the hygienic heading are considered the diseased conditions to which the diaphragm is subject, waist-constriction, special exercise of the diaphragm, how to breathe, etc. An appendix, written a year subsequent to the essay itself, gives practical conclusions.

Index Medicus [*Redivivus*]. "Mr. George S. Davis, of Detroit, has undertaken to continue the publication of the *Index Medicus*, on the same general plan and with the same regard to typographical accuracy and finish as heretofore. On account of the delay required to perfect the arrangement, the first number of the journal for the current year will comprise the literature of January, February and March, after which it will appear monthly, as usual. At the end of the year, in addition to the usual annual index of names, subscribers will be furnished with an index of subjects to the volume.

"So many expressions of regret and urgent remonstrances in regard to the threatened discontinuance of the *Index Medicus* have been received that we think we may venture to congratulate the profession on Mr. Davis' public-spirited determination to carry on the enterprise in spite of the fact that thus far it has not been pecuniarily remunerative.

"It is requested that all exchanges, and books and pamphlets for notice, be sent to *The Index Medicus*, Washington, D. C."—*John S. Billings, M.D.*, *Robert Fletcher, M.D.* Washington, March 4, 1885.

Babyhood. Devoted exclusively to the care of infants and young children, and the general interests of the nursery. Monthly, fifteen cents a number, $1.50 a year; same size as the Albany Medical Annals. 18 Spruce street, New York. Leroy M. Yates, M.D., is medical editor; Marion Harland is editor of departments relating to general nursery routine; George E. Waring, Jr., and many other eminent men and women are among the contributors. Such names guarantee a high order of merit.

ALBANY

MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

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THE GERM THEORY OF DISEASE.*

BY WILLIAM H. THOMSON, M.D., NEW YORK CITY.

(Albany Medical College, 1859.)

Professor of Materia Medica and Therapeutics, and Diseases of the Nervous System, University of the City of New York, Medical Department; Visiting Surgeon to Bellevue Hospital, etc., etc.

LECTURE I.

Mr. President and Gentlemen:

For reasons which will appear in the sequel, I now ask your indulgence both for the matter contained and for the form of the remarks with which I now begin the discussion of my subject, viz., "The Germ Theory of Disease." I have ventured to do so in a manner which may test your patience, but ere I close my first address I hope to be able to justify myself to your satisfaction for so doing, and hence I herewith proceed.

In any general view of human diseases, our attention is soon arrested by certain very remarkable features which characterize a large and important class. These features not only ally the different members of the class to each other, but separate them completely from every other order of morbid processes, and it needs but little further examination to perceive that these features are not peculiarities only, but essential elements in these diseases, lying at the very basis of their pathology, and which they show by their special characters to belong to a wholly distinct order of causes from all other kinds of disease. We would enumerate the more prominent members of this class as comprising variola, scarlatina, diphtheria, measles, typhus fever, the plague, typhoid fever, cholera, hydrophobia, and pertussis. Yellow fever and erysipelas we would exclude for reasons we will state; while syphilis, with some of the identical features of the family, yet presents others which seem to refuse all relationship with any of its branches. For want of a better title, we have ventured to apply to them the term *virous*, although its Latin derivation implies a poison—the very idea of their nature against which we would protest, as confounding them with a class of agents with which they have hardly any thing in common.

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* This course of two "Alumni Lectures" was delivered in Albany, at the twelfth annual meeting of the Alumni Association of the Albany Medical College, under the auspices of the Executive Committee of the Alumni, on Alumni Day, Wednesday morning and evening, March 4, 1885.

In the first place we are met with the important fact that not one of them are we able to trace, as we can other maladies, to disordered functions of the body, but they are always themselves their own cause. In other words, they are invariably invaders from without; and the human frame can, by no process of its own, normal or abnormal, give origin to them, any more than it can give origin to vegetables or animals. We may go still further and say that as the living body cannot first generate them, however it may *reproduce* them, neither can any conceivable composition or decomposition of solids, fluids, or gases, be their beginning; for of this truth we have a demonstration which no one can gainsay. A very few general causes, which have always existed, are made the direct sources of numerous most specific diseases, which, every one of them, have historic beginnings. In other words, in many countries the origin of a disease we know to have been an *importation* — a definite chronological event, and one of the exchanges of commerce or conquest; so that, instead of arising from some unlucky mingling of physical elements, they date invariably from a mingling of human beings. The nations of Europe for ages knew no more of scarlatina or of small-pox than they did of tobacco or of gunpowder; while, on the contrary, the like of pneumonias and rheumatisms—true functional diseases from elemental causes—have been the lot of man ever since Paradise was lost. Their commercial, rather than chemical, origin, as well as their first route of travel, is sometimes curiously indicated by their names, for as the names Damask, Calico, and Cologne, preserve the origin of what are now world-wide manufactures, so we speak of a man in Ohio dying of *Asiatic* cholera. This great fact is often strangely ignored by writers who persist in ascribing these modern diseases to causes more ancient than any human tradition; whereas, small-pox, measles, and this whole tribe, in America, originated not from dunghills or cesspools, but from *ships*. That these diseases, which fill the grave with numbers greater than does any other array of our destroyers, and which ever strike down those who are yet far from the natural measure of their days, should have attracted the greatest attention, was inevitable. But we have wondered why it is that their many, wholly peculiar and distinctive, characters have served so little with nosologists in forming their classification, or a consistent theory of their pathology. At present, they are generally arranged in text-books according to the more prominent symptoms to which their operation in the system gives rise. Thus, most of them are classed under the head of fevers, some under skin diseases, while hooping-cough and hydrophobia are made to keep company with asthma or hysteria.

But, in our view, the pathology of these diseases has been most confused by accepting a few imperfect analogies as indicating a relationship between virous diseases and poisons. First, viruses are classed with poisons, because both come from without the system, and are, on that account, true morbific agents, operating simply because they have gained entrance, and, therefore, generally speaking, it matters little whether they have got into a healthy or unhealthy system. Variola and morphia, the bite of a mad dog and the bite of a rattlesnake, produce results equally as disastrous in a prize-fighter as in a consumptive. Both also resemble one another in causing a wonderful disturbance from small beginnings. But perhaps the most effective consideration for confounding them with poisons has been that the two are equally mysterious; and it follows practically that we must seek the antidote to a virus, or, failing in that, must promote its *elimination*, like that of a poison, by the great emunctory organs.

But let us recall what essentially constitutes a poison, and apply its well-known rules to the equally known characters of viruses, and see how they will harmonize. We begin with the broad fact that, though some, as the vegetable and animal poisons, are organic *products*, yet they are themselves never any thing but chemical or physical agents, and purely physical conditions are required for their action, and nothing else. Thus, the first law of a poison is that, whether mineral, vegetable or animal — either a grain of arsenic, of strychnia, or a drop of venom—it needs but a twinkling, after it is fairly swimming in the blood current, before the man is poisoned. Whatever the delay, that has not been in action, but in *absorption;* and all its symptoms, whether trivial or fatal, have nothing to do with *time*, when once these agents have reached their destination, any more or less than has the thrust of a bayonet. We have but to instance how the action of arsenic, strychnia, aconite, snake bites, etc., can be delayed, or suspended, by a ligature about a limb in which they have been injected to establish this analogy with simple physical laws. But, secondly, if time is not an element in poisoning, *quantity* is, and the operation is directly proportioned to the *amount* introduced. Thus, in all cases, no matter how powerful or concentrated the agent, it must be an appreciable and definite quantity to produce a given set of symptoms; so that, for instance, one amount will kill, a less amount will make the patient very sick, a still less quantity will make him less sick, and smaller doses yet are often medicinal. Thirdly, a poison has no variations either of manner, time or place, in its action — in this, also, preserving analogies, with physical agents. Strychnine of a mild *type*, or a year in which serpents are twice as venomous as in the previous year, or tartar emetic which will vomit in certain latitudes, are absurdities. Again, as a physical agent, like a bullet, for example, kills by its passage, in the same way precisely acts a poison like prussic acid — that is, prussic acid is no more generated in the body which it is fearfully destroying than are bullets. Lastly, the operation of poisons once over, they leave no *specific* life impress on the system, which rids itself of them the same way that it rids itself of urea or carbonic acid; and should the patient, the following week, get the same dose, he will repeat the same experience, and so on *usque ad finem*. Surely, we have only to state the essentials of a poison to feel that at every step we are departing from a virus! Thus, at the outset, in irreconcilable contrast with the necessarily immediate action of poisons, we meet in viruses with the significant fact that *their* morbid symptoms are *never* immediate, but, on the contrary (and this, also, is no less important), they require not only a prolonged, but a *definite* lapse of time, each particular virus having its own term of development with the same kind of regularity that accompanies the different stages of vegetable life. It is difficult to find in chemical or physical processes even the approximation to a principle which will explain this remarkable phenomenon in virous diseases, and therefore pathologists (without often recognizing the legitimate bearing of the name) have been obliged to borrow for it a term proper only to the living organic kingdom, namely, *incubation.* We think the choice unfortunate, for it implies in viruses an *animal* life, with which they have but very few analogies, and would much prefer it had been *germination.* Like other servants, words not seldom make a servant of their employer, the mind, and we have suspected that this word, "incubation," may have caused the true nature of viruses to be missed, by its directing the mind on the wrong scent, namely, that virous diseases were owing to a vast hatching of little *animals.* A diligent search has therefore been made for the small-pox animalcula, but because neither in that disease nor its congeners have any such things been found, the analogy with organic life in the invariable phenomenon of incubation, besides many others no less strong, has been surrendered, the general view reverting to the old idea of a poison.

But what tangible poison is there which must traverse the circulation some millions of times, for nine, fourteen or thirty days, before it can act at all? The poison advocate *must* eliminate this troublesome fact before he can harmonize his reflections. But long ere his mental processes have brought this about he will encounter a series of incompatibles, beginning with one which is even worse than incubation, namely, this: Does he, when securing the entrance of a particle of arsenic, or other poison, not only expect to wait two weeks before he sees any thing more of it, but also expect that his patient will, at the end of that time, have almost turned into arsenic himself, reproducing enough of it to poison all New York. The historian Robertson states that one negro, landed on the coast of Mexico, with a few variola pustules, destroyed three million and a half of people within a wonderfully short time. Now, who thinks of including in the same division of nature a grain of sand and a grain of mustard seed? There is a transcendent difference between these two. For the grain of sand must remain a grain of sand forever, but the other grain beside it begins to go through a series of extraordinary changes—definite, however, in succession, time and result, which last is, mustard seed, innumerable. Give the original grain opportunities, and it will show it has infinite capacity for such opportunities, and could fill the fixed stars with mustard. But precisely this difference confronts us between a particle of arsenic and a particle of variola crust, and yet shall we consider them like agents, to be named alike?

It has been well said that the sublime narrative with which the Bible opens does not adduce a manifestation of Infinite Power nearly so wonderful as when it represents the Omnipotent giving to the first seed its mysterious principle while the earth stands. Life and Death are wonders, because all physical nature cannot tell of them a word; but the production of Life from Life is a greater wonder, to which the lesser two owe their very existence; for, without it, physical nature would soon have the world to itself once more.

When we are confronted, therefore, with this great principle, which the profound old Egyptian thought it unlawful to name, we feel at once that we are an infinite distance from crystallization, cohesion, oxidation, affinity, and all such forces.

But it is indisputable that this principle is a leading element in viruses, for it occurs in them to an amazing degree, and observing closely its invariable law of sequence to a definite series of changes, occupying definite periods of time, regulated by the particular virus. For the more we examine these two characters, Incubation and Reproduction (and the no less important one that intervenes, Development or Growth), the surer grows the conviction not only that they are unmistakably allied to *organic* phenomena alone, but that they settle the whole pathology of these diseases, because they are the only reasons that these diseases are diseases at all. If a drop of variola lymph cannot be reproduced in a man, then he need fear it as little as a drop of molasses. A virus, therefore, is nothing without reproduction.

But reproduction quickly brings up another great feature of viruses; for reproduction necessarily involves propagation, and these diseases must, therefore, from their very nature, be *Communicable.* We prefer this word to Contagious, for this latter unfortunate term somehow stirs up some medical minds to fierce hostility to any thing with which it has any connection. But no one, surely, will deny that virous diseases are "communicable," if not "contagious," and they are so because reproduction involves propagation wherever the conditions of reproducing life are to be found, and viruses find these conditions in animal bodies, and on that account spread from body to body. There is nothing, therefore, inexplicable in this character of viruses, unless we think of them as *poisons*, whose laws are physical. But how can a virus be a poison, if it can have no existence without these three elements, incubation, reproduction, propagation, when it is absolutely absurd to talk of a poison, for instance aconite, having either of them in the remotest degree?

Incubation, reproduction, and communicability we have shown to be the essentials of viruses—facts that no more occur in true poisoning than in pleurisy or fractures. But there yet remains the great subject of the morbid process itself of these diseases. Between the periods of incubation and reproduction intervenes the period of development, when the peculiar symptoms constituting the particular virous attack make their appearance and run their course. True poisoning has this one period only, while viruses are always accompanied by the other two; but the phenomena of this stage also are, in viruses, totally different from those that characterize the operations of poisons. In fact, they are hardly ever analogous, much less similar, as they should be if they were similar agents. The action of poisons is rapid and tumultuous, analogous only to chemical reactions, and science has demonstrated that slow poison, that mysterious terror of the middle ages, and which even now haunts the popular mind, is a pure myth, with no more real existence than the Immortal Elixirs or the Wandering Jew. Slow poisoning can only be *repeated* poisoning. In no case, not even in the subtle animal poisons that give rise to erysipelas, pyæmia, and similar states, does there occur an elaborate and necessary succession of symptoms which can never be reversed, least of all a succession whose steps are so slow as to require three days, or seven, or nine, or fourteen, ere a certain symptom, peculiar to the poison, will follow a previous similarly peculiar symptom. But regular and definite changes, preserving their order during the access, height and decline of the process, and measured by a certain number of hours, days or weeks, according to the particular disease (just as the similar variations in the period of incubation), are the characters of the period of virous development. We thus are often able to predict the issue in time as well as manner, by observing a few of the initial steps; but in poisoning our only real principles of prognosis are the *amount* of the poison actually in the system, or in danger of getting in, and, very secondarily, the individual susceptibility. In every epidemic of virous diseases the vast majority of persons really exposed to them escape altogether. How inexplicable would this be if they had all received equal doses of a poison; for how many will escape of a dinner party who have mistaken aconite root for horse-radish? Viruses, with one or two exceptions, obstinately refuse to afflict more than one species, or than certain ages of the same species; but if a virus is one of the poisons, why cannot our experimenter give hooping-cough to his cat as easily as he can give it fits with strychnia or the opposite with woorara?

But viruses have a great many other characters which separate them from poisons. Thus, we said, quantity is a necessary element in poisons—it is hardly an element at all in viruses; for who can hit upon the poisonous, and less than poisonous, dose of scarlatina, for instance; or if, instead of inoculating with variola lymph, enough only to moisten the tip of the lancet, we injected an ounce, would the patient have small-pox in an hour or a day?

Again, our experimenter ought, in the generality of cases, to produce with like, or proportioned, doses of poisons, like effects in all, in old and young, in men and in animals, and at all seasons of the year. But viruses, on the contrary, are exceedingly capricious, killing some and simply touching others, who yet seem alike in exposure to the virus and in every other respect, as two children of the same parents, one dying with scarlatina maligna, the other recovering with scarlatina simplex. Some viruses are killed by frost, some never leave warm climates, against others we use heat as a "disinfectant." Frequently for years a virus will not affect some persons, and then suddenly attack them. Can this be said of any poison? Thousands they will attack at no time, nor after the most diligent coaxing; why not, no one knows. Hertwig had a dog bitten by nine mad dogs, without other result than sores.

Again, viruses are affected in their development by variations, often inappreciable to our senses, in their soil, climate and season, as only organic growths are. Thus, we continually see in the vegetable kingdom the same seed showing every degree of development, owing to causes which are more often unknown than known—thousands of seeds never coming to any thing, others growing most luxuriantly but a few feet from where they are small and dwindling. One year the crop is great, the next season it is in every way inferior; while the same plot which brought forth abundantly in one month will not yield a blade in another month; and still further, the same soil will refuse to yield any more of a product for which it once was famous. We need not repeat the character of viruses in close analogy with all these familiar facts. Ever since viruses have been observed at all, their variations of type, and season; their irregular development in different constitutions; their failure to develop at all in others; their general indisposition to develop in the same soil again, have been observed and noted with wonder. In the same epidemic, also, the cases at the height of the epidemic are more violent than at its decline, just as the last of any crop are the poorest always. The single remarkable fact that it is their rule to occur but once in the same system would, by itself, make us suspect that we were dealing with nothing simply physical or chemical; for it is inconceivable why such will not always act, just as arsenic will inevitably act at any time and anywhere, in July and December, in Calcutta or London. But in *growths*, analogies with these peculiarities are frequent enough, for the exhaustion of some one ingredient, which the most careful chemistry often cannot discover, suffices often to prevent a reproduction of the same seed in the same soil where it had grown before. The forms of vegetable life are often limited to certain climates, hemispheres, countries and small localities; and, similarly, certain virous diseases are like the plague, which never crossed the meridian from the Persian Gulf to the Caspian Sea on the east, or the longitude of Tangier on the west. Others, again, are found only in Arabia or Poland, or India, or even in certain towns only, as the strange ulcer of Aleppo, which we have ourselves witnessed. The question then arises, if we admit the relationship of viruses to the living organic kingdom, under what division of that kingdom should they be classed? Do we find any great family of organisms to whom we can ascribe such undesirable connections as the tribe of viruses? We think there is one, and only one, but it is one that answers all our requirements, for its spread is so universal, multiform, and diffusive, that we would, *a priori*, have looked for some one of its myriad subdivisions as given to entering animal bodies and then multiplying at such a rate as to cause the most serious complications. Let a drop of pure distilled water be but preserved long enough from evaporation in any part of the world, where it will not freeze, and in a very few hours it will be filled with all manner of shapes and forms of a vegetable life, all of whose infinite varieties have been lumped together as fungoid growths. When the microscope first revealed this new world, it seemed as if it could be accounted for only by spontaneous generation; but no respectable authority maintains that hypothesis now, although the contrary obliges us to believe that we must inspire untold millions of living germs with every breath we take, and swallow corresponding growths with every drink. Then, to calculate how many of the *seeds* of these things there must be in a single inspiration, if those that develop are in the same proportion to those that do not, as in other vegetable forms, would require a line of figures as amusingly incomprehensible as the miles of astronomy. But we are not left to conjecture that some of these forms may be the causes of the destruction of other living forms. Repeatedly do epidemics of fungoid growths suddenly overrun countries and continents, generally from the East, to the great damage of mankind in all their valued crops. Mildew and rust, the great potato disease, and, latterly, the vine odium, of a few years since, which not only desolated the vineyards of Asia and Europe, but without appearing to develop in them to the naked eye or microscope, yet caused every form of fruit to be sickly and dwindling, are proofs enough that new species of fungoid growths can arise to the destruction of other forms of life. But we have proofs, besides, of *animal* organisms being destroyed by the development of fungoids, which we can see for ourselves sometimes, and sometimes with the microscope. The price of silk is as often affected by the appearance of a fungous epidemic in the growing silkworm as is that of flour by a fungus in the growing wheat stalk. The common housefly frequently gives up the ghost for the same reason, and can be seen turned into a bed of beautiful fungoids. Now, it is a suggestive fact, to answer an objection liable to arise, that the microscope has failed to reveal fungi, any more than animalcula, in virous diseases, that the initial stages of these very fungoid diseases of plants and animals which become *finally* palpable are wholly invisible. The sporules of some huge mushrooms, even, have never been discovered. Now, considering how infinitely varied are the forms of these low vegetable organisms, does not analogy favor the hypothesis that there are fungoid growths, finding their conditions of development in animal bodies, which are invisible in all their stages, just as all but the *concluding* stages are invisible in many fungi that are causes of disease to other organisms? A vast number of these fungoid growths are developed in fluids in the various processes of fermentation, but which all have a hidden period of "incubation" in these fluids, during which, unseen, they are causing the greatest chemical changes in them, until finally the cryptogamous plant reappears, multiplied thirty fold, and with each of its million sporules endowed with the capacity of working the same changes in the next similar fluid into which it may fall. Another peculiarity in these low forms of vegetable life is a remarkable facility of altering their forms and characters (and therefore the effects which they may produce), from difference in their soil and habitat. Thus, no one, before Mr. Lowe demonstrated it by actual experiment, would have suspected that the achorion Schönleini of the favus disease was the same product with the totally different looking aspergillus glaucus of yeast. But Mr. Lowe transplanted the former from a scald head to a piece of dough, and it went through its stages of growth with greatly accelerated rapidity over its progress on the scalp, and finally turned out a true torula cervisa. Now, this affords a very interesting analogy to a remarkable fact in the great type of virous diseases, which fact by itself should suffice to make us suspect we were dealing with an agent entirely distinct from a poison. The rank and deadly variola transferred from the human system, where it develops with disastrous energy of growth, to the system of a cow, becomes transformed by its new soil into the mild and trivial vaccinia, which runs a much shorter and less tumultuous course. But though its new habitat has altered many of its most prominent features, it still retains its identity with variola, as it leaves the same specific life impress upon the system.

We have no opportunity, from having already drawn so largely on the time of the society, to more than indicate the important bearing that our views of the pathology of virous diseases must have on our treatment; for if the morbid conditions of these diseases are the results of an animal *poison*, we should treat them so, by antidotes, if possible; but, as that can rarely be the case, by promoting their elimination by evacuants or eliminatives. On the other hand, if they are the results of a process of growth, we have a wide field yet to investigate whether we cannot beneficially modify these growths, as in vaccinia, or when they come out on the surface abort them, as variola pustules with nitrate of silver, or else dwindle their growth by charging the system, if practicable, with agents whose presence we know to be unfavorable to fungoid life, as mercury, muriatic acid, chlorine, creasote or the sesquicarbonate of ammonia.

Again I must beg pardon, gentlemen, for having detained you so long listening to the foregoing remarks, when I state that they are simply copied out just as they are to be found in the *New York American Medical Times* of September 20, 1862, or more than twenty-two years ago. After leaving the halls of our *Alma Mater* I held the position of assistant physician to the Quarantine Hospital of New York for over two years, and there I had the fullest opportunities any institution could afford in this country for the observation and study of communicable and epidemic diseases. I early became satisfied in my mind that the leading phenomena of these diseases showed most unmistakable relations to the laws of growth, rather than to the laws which govern physical or chemical agents; and when I read this paper before the New York County Medical Society it elicited such a discussion as to lead the society to request that the paper be published in full by the then only weekly medical journal in New York, which was at that time edited by Dr. Stephen Smith and Dr. George F. Shrady, the latter gentleman now editor of the *New York Medical Record.*

Now, in citing these remarks, which were thus in print long before the word bacterium was even invented, I beg leave to say that I have not the remotest idea of laying claim to any priority of views on the great question of the germ theory of disease, which is at present discussed so widely in the profession. My only purpose in briuging up this old paper is to direct attention to the grounds upon which the germ theory of disease rests, quite apart from any question whether a single one of the multitudinous living bodies which microscopic investigation has recently revealed has any casual relation to specific forms of disease or not.

My reasons for doing so are that at present many persons seem to think that the germ theory of disease is wholly a question of microscopy, and that it will stand or fall according as the relation of this or that kind of microbe or bacterium to this or that disease be proved or disproved. When, therefore, they hear that Koch's comma bacillus, instead of being the dread Asiatic destroyer, has been found abundantly in the mouths of healthy persons, and that even its own carefully cultivated progeny transplanted from the intestines of cholera victims have been taken for breakfast and no harm done, they are apt to regard this as a serious blow to the germ theory of disease itself. When you add to this the fact that different micrococci and divers rods and divers spirals have been successively named diphtheria, only to be found by some other investigator where there is no diphtheria, or not found at all where there is, and so on throughout a daily extending list of false discoveries or mistaken identifications, they are very likely to become confirmed in a most bigoted incredulity of the whole matter. Now, it is a curious fact that medical discovery always has had a battle to fight at first, not with skepticism, but with incredulity. Skepticism is a very desirable thing at all times in medicine, by which we mean that frame of mind which is slow to accept any thing new in the medical world, because, remembering the heaps of dead theories which strew the road of the past, it prefers to wait both for evidence and for the unerring test of time before either receiving or rejecting a profferred statement or doctrine. But incredulity, on the other hand, is a grievous mental infirmity, which disbelieves by a kind of false intuition, and which, therefore, cannot be reasoned with any more than you can reason with a true intuition. A well-known medical acquaintance, for example, believes that hydrophobia is purely a disease of the imagination, with the same kind of conviction that he has that a triangle cannot be made a square, and therefore you might as well try to convince him that a triangle can have four angles as that hydrophobia is any thing else than a phobia. My object at present, therefore, is to try and show that there is neither place nor room for incredulity in this question on the part of any intelligent medical man, although we may long remain properly skeptical of alleged identifications of microscopic forms with special diseases until the last legitimate condition of demonstration be fulfilled.

I make this assertion because not only can the chief positions on this question which could be maintained twenty-five years ago be shown to be still as conclusive as ever, but every advance in biology since has only tended to make the case stronger. Asiatic cholera, for example, must be a growth, because in no other way can its mode of extension be explained. If it crossed from India like some inorganic material which was wafted through the atmosphere, then the further it traveled the less it would become, and at best resemble only the volcanic dust from the eruption of Krakatoa as it was borne up into the thinnest strata of the air. But cholera, instead of taking the wings of the wind, has followed caravans first, then taken ship like a passenger inside the ship, if not even inside a trunk, so as to develop in every new locality from small beginnings; in other words, wherever it appears anew it springs up to multiply. But what thing on earth multiplies unless it lives?

On the other hand, in the time which has elapsed since I left the halls of our *Alma Mater* a revolution has taken place in our whole conception of the field of biology equal, if not surpassing, any revolution in the history of science—a revolution whose bearing upon the germ theory of disease is perfectly decisive as regards the main question, quite apart from any supposed discovery by microscopists of specific kinds. We can go now far beyond any assertion of twenty-five years ago respecting the action of minute organisms, because of the discovery that the world of microscopic life is actually, in mere bulk, the largest living world on the globe—larger far than the bulk of all visible forms of life put together; and, moreover, instead of being a world isolated by itself, the interdependence and interactions of the microscopic and the visible living worlds are unceasing and essential to the very existence of both. The first step in this direction was made by the wonderful Lewenhoek, who, more than two hundred years ago (in 1680), correctly saw, though with a wretchedly imperfect microscope, that yeast consisted of minute globular or ovoid particles. By the same instrument, four years afterwards, he actually made the first discovery of bacteria in the tartar on the teeth of healthy persons, and there can be little doubt that had he been better equipped he would then have made the greatest discovery of modern times, namely, the dependence of all fermentation and putrefaction in organic solids and fluids upon the presence and activity of microscopic organisms; or, in other words, that only life decomposes the textural work of life.

Schwann and Cagniard-Latour, who about 1838, and independently of each other, resumed the old Dutchman's inquiry, used the better instruments of their time, and discovered that Lewenhoek's globules are membranous bags, which exhibit all the morphologic characteristics of vegetable cells, and, like these, when brought under proper conditions, increase and multiply in the biologic sense. Taking this together with the long known fact that in vinous fermentation the yeast increases as the process progresses, they naturally concluded that yeast is a species of plant, and it is the life of that plant which somehow or other causes the chemical change. It is the special merit of Schwann to have adduced powerful experimental evidence in favor of this view. In his case the observations on yeast were incidental only to a more comprehensive investigation, the original aim of which had been to solve the great question of spontaneous generation. Processes of putrefaction having long been known to be invariably accompanied by the formation of vibriones and other microscopic organisms endowed with voluntary motion, he prepared infusions of flesh and other putrescible matters in glass flasks, and, after having hermetically closed these, exposed them for a time to the heat of boiling water, so as to destroy every trace of living germs that might be present. The contents, when preserved in that condition for ever so long, showed no sign of putrefaction or of life of any kind. But when exposed to the air they did putrefy, and soon swarmed with living organisms of various kinds. Obviously it was the air which caused this twofold change. But then, the air which had been shut up with the infusions did not act. This, however, might have been owing to an absorption of the oxygen by the juices. Schwann, therefore, in another set of experiments, allowed the boiled (and consequently germless) infusions to communicate freely with the atmosphere, in such a manner, however, that no particle of air could enter the flasks without having first passed through a red-hot glass tube, and thus been freed from any germs which might float about in it. In this case the air had fair play in a chemical sense, but yet not only did no life of any kind make its appearance, but even the chemical changes failed to set in. Exactly similar results were obtained by Schwann in experiments with grape, whether previously mixed or not with yeast. Schwann had no doubt in his mind about the close analogy between vinous fermentation and putrefaction, the less so as his experiments on the action of certain antiseptics had shown that what is an "antiseptic" to a fermentive change is a poison to the organisms characteristic of the case. Thus, for instance, he found that white arsenic and corrosive sublimate, being poisonous to both plants and animals, stop both putrefaction and fermentation; while extract of nux vomica, being destructive of animal but not of vegetable life, prevents putrefaction, but does not interfere with vinous fermentation. Schwann's views on the phenomenon were fully confirmed by subsequent investigators. Amongst these we may mention Helmholtz, who showed that oxygen evolved by electrolysis from water, does not, like air, induce vinous fermentation. The same observer showed that boiled grape juice when tied up in a bladder does not ferment, even when suspended within a tub full of fermenting juice. The evidence afforded by this experiment was considerably strengthened by Mitscherlich, who proved that even a septum of filter paper effectually stops the propagation of the reaction. More striking still is an experiment made many years later by H. Hoffman. He took a test-tube full of sugar water, and by a plug of cotton inserted within it divided the liquid into two parts. To the upper part he added yeast, which of course induced fermentation there; but the change did not propagate itself through the cotton wool to the lower portion. The same material had done good service some years before in the hands of Schröder and Dusch, who proved, in 1854, by a most extensive series of experiments, that the something in air which enables it to start fermentative changes in boiled infusions of meat or malt, in grape juice, etc., can be effectually removed by filtration of the air through cotton wool. It is true the "etc." here does not include milk, which they found to turn sour in filtered as well as in ordinary air, but this exception was subsequently explained away by Pasteur, who found that germs immersed in alkaline liquids may survive temperatures considerably higher than 100° C.*

A number of other important researches, which led to substantially similar results, must be passed over here, and may be, because what we have quoted has never been disproved, and is consequently quite sufficient to show that, in the case of vinous fermentation and putrefaction at any rate, those atomic motions, which, according to Liebig, cause the disintegration of the fermenting substances—if the notion is to be maintained at all—cannot be admitted to have an existence outside the living bodies of certain organisms characteristic of the respective changes. To any unprejudiced person this would appear to be sound logic; but Liebig did not see it, and for a long time he had the majority of chemists, at least, on his side. No reasonable person could have denied the irresistible force of the arguments of Schwann and his followers; but these chemists somehow or other managed to ignore the facts, until Pasteur, by means of a most thorough and extensive experimental research (of which the principal portions were published from 1857 to 1861), simply forced the attention of everybody to the physiological side of the subject, and, by absolutely unimpeachable evidence, proved that Schwann's views are substantially correct.

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* See article on "Fermentation," Encyclopædia Britannica.

In 1862, when my paper was composed, Liebig's great name still prevented the general acknowledgement of the final demonstration of Pasteur, but could do it only for a time. Theory can no more survive the opposition of experimental test than snow can survive fire, and we stand now with our ideas adjusted to such facts as these:

First. That dead vegetable or animal tissues or fluids have no greater inherent tendency to decompose than have rocks or stones, fluids or gases. Let flesh or blood, milk or urine, remain in contact with air, and they will show no spontaneous decay or falling to pieces whatever, if *only* air be present. The condition, and the sole condition, is that the air be *pure.* Pure air can be obtained by filtration through cotton; let that be done and air and milk will both remain sweet through summer and winter, and from year to year, till the cotton plug is removed. Let this be done but for a moment in any ordinary dwelling house, and soon all appears changed. The milk becomes alive, and thickens and smells, as it goes on abounding more and more in things which come past the cotton plug as—what ?—as germs.

From this discovery—as well established as the circulation of the blood—one important deduction necessarily follows, namely, that but for these omnipresent germs we and all large animals, yes, and all trees and herbs, would soon cease to be, because but for the ceaseless activity of these little things all nature would soon be choked by its own dead. No tree that fell in the forest would decay, no animal that died on the ground would disappear. Mammoths in Siberia that died thousands upon thousands of years ago are found now kept in ice, because ice and germs are mutually exclusive, but wherever these microscopic things can get at the flesh of any monster their work is quick to return every thing dead back to the inorganic world; so that we can recognize in them the beneficent rôle which Owen assigned to them when he termed them the great, though invisible, police of nature, watching to remove every particle which should be put away, in order to make room for the next comer.

Even physical science comes in now with a word to say about pure air, namely that it is not fit to live in, or rather, that all earthly life would soon cease in a world whose air was really pure, except, perhaps, at the bottom of the sea. Aitken, following earlier experiments, has shown that if steam be let into a jar full of air filtered through cotton there occurs no visible vapor, even when the jar is surrounded by ice and salt, for the steam only precipitates as simple water. Let but a straw or a glass rod be introduced for a moment and puffs of white vapor surround and ascend from these objects introduced from without, because the vapor condenses about some of the particles of dust which have clung to their surfaces. In other words each little particle of fog or of cloud is a particle of watery vapor condensed upon a solid nucleus, and but for this microscopic dust suspended in the air, so as to constitute the little nuclei for the watery vapor to float upon, we would have neither clouds nor rain upon all the face of the earth. Microscopic dust, therefore, in the air above is necessary to the world of life below. This dust is *everywhere*, instantly to form the white cloud about the flying locomotive even on the clearest winter morning—inorganic dust chiefly, it is true, composed of chloride of sodium from the sea spray, or coal dust from the city's chimneys, or, less commonly, dust from the ground itself—less common because this is too heavy from most soils; but ever intermingled with this lifeless dust, often in amazing number and variety, modern research has come upon a floating world of life, some of whose relations to ourselves we must leave now for another lecture to sketch.

Lecture II.

Our endeavor in our former lecture was to show that the subject of the Germ Theory of Disease cannot be discussed without we first adequately appreciate and enter into the full measure of the significance of the relations of the microscopic world of life to the world of life which is not microscopic, not as respects disease, but as regards the mutual relations of each to each wholly apart from disease. The relation of the microscopic world to disease can, at the most, be but incidental, and can constitute but an infrequent, almost accidental, working of its laws. Its main function is to restore the balance of nature, by clearing the world of all the wrecks of death, and this is done by a never-ceasing activity of microscopic organisms conjoined to an omnipresence well-nigh complete.

Not until we fully grasp this last idea, that is, omnipresence, can we be in a position to judge the question as it ought to be judged. It is difficult for us to imagine any thing which we do not see. So much does the mind depend for its information upon the eye that information which reaches us by any other channel is only slowly accepted or fully recognized. But this vast world of microscopic life we can see only through the smallest possible apex of an angular glass. In my college days we prided ourselves on the attainment of using those little pencils or rays of light which a fourth of an inch objective admitted. We wondered then how much farther it was possible to go with the working of a lens that left so little space between it and its object when it multiplied that object 500 diameters. Now, however, the life history of a bacterium has been followed hour by hour, by night and by day, without an instant's intermission, by relays of observers, so as to observe every stage of its existence from a rod to a spore, then to another rod, then that to its division into other rods, and then these again watched till here and there fusion between rods took place, then liquefaction into a structureless plasm, and then finally in this were seen to appear one by one new spores, as would stars condense out of a nebula. But with what different optical powers was all this done from the pride of our possession twenty-five years ago! Instead of multiplying 500 diameters, the lowest power used for this investigation multiplied 2,000 diameters, and for watching the final stage of spore-making a wonderful glass was employed which showed things just visible as distant organisms only when they were magnified 5,000 diameters. 50,000,000 of the largest or adult forms of these bacteria, we are told, would find room in a cubic inch; and yet this bacterium, which was wholly beyond ken only fifteen years ago, is the bacterium termed the ever-present agent the world over which causes meat to putrefy, and is destined to send the bodies of each one of us back to the dust from which we came, so soon as our hour has struck.

So far the bacterium termo is pronounced the smallest of living things. It has a perfect organization, and by the use of the 5,000-diameter glass it is seen to move with power and grace by two rapidly vibrating cilia, one at each end, going through its evolution and its work with all the completeness of the most perfect organism which the naked eye beholds. But so omnipresent is it that the only safe place from its power, the only refuge from its energy, is in some carefully prepared nook which communicates with the outer air by a narrow tube filled with cotton! So it is, but how difficult to apprehend or comprehend that minuteness of individual form is conjoined with two such immense factors as practically unlimited diffusion in the air and of practically unlimited power of multiplication!

But here is another fact which we may well take note of. That 5,000-diameter glass could not see all that there is to be seen. Those spores which became visible to the yellowish plasm came out of a living mass which could not be resolved—a nebula which is made up up of constituent particles that are as much entitled to the name of bacterium termo as either the spore or the rod; for the nature of the thing, and its powers in virtue of that nature are just the same in one stage as in another, just as an acorn is an oak and nothing else—certainly not a pine or a bush. Who, therefore, can now dogmatize and say that because the germ of small-pox has not been seen therefore it is not? Let us not be incredulous; let us only be skeptical, and, guided by common sense, simply *wait.*

Still another fact should we take note of here, viz., that these little organisms are not only multitudinous, but also of most extraordinary variety. No forest which clads the hills can show so many different kinds of growth as the eye can take in often in a single field under the microscope, and these are not different in form only, but with many of them a greater variety of function and of living endowment has been positively demonstrated than a botanist can enumerate for the different species of plants collected in an afternoon ramble. Pasteur, for example, has demonstrated that for each change which takes place in the fermentation of beer a separate organism is the occasion, as distinct in species from its predecessor as the mason who lays the foundation of a house is of a different trade and works in a different way from the carpenter, or the painter, or the plumber, who complete the structure. In fact, years of investigation must elapse and many companies of investigators must work ere we can hope to arrive at any thing like a full knowledge of the variety of kind and of action which belongs to the living world which the microscope has revealed. As an illustration of this important fact I may cite here the observation of Raulin, not upon a microscopic organism, it is true, but still upon a form of life which shades down into the microscopic world and is sufficiently allied to microscopic organisms to illustrate their laws. Moreover, not being a minute thing relatively, in itself, these observations may be taken by some as surer in their results than they can imagine as possible with the supposed vanishing points which the microscopist studies. Raulin experimented upon the aspergillus niger, the mould which grows so luxuriantly on lemons and other acid fruits. He grew this fungus in a fluid containing sugar, tartaric acid, etc., which he devised himself and which he found gave uniform results. Raulin found that the total crop of fungus grown in this fluid in a dish of definite area weighed, when carefully dried, 25 grammes. Now, Raulin's liquid contained 1-50,000 part of the metal zinc, but if this apparently excessively small ingredient were withdrawn, the resultant crop fell to 2.5 grammes, or only 1-10 of what may be considered a full crop. Further, Raulin found that the addition of only 1-160,000 part of nitrate of silver stopped the growth altogether, and, moreover, that the growth of the aspergillus will not even commence in a silver bowl, so sensitive is this particular fungus to the action of this particular metal, while, on the other hand, nothing seems to make it spring up and multiply as the presence of slight traces of zinc. Now, certainly these experiments, and others of the kind which we might cite if time allowed, are very instructive, showing what apparently insignificant trifles may cause the growth of an organism to flourish or, on the other hand, to languish, or, again, not to grow at all. But how easy does all this make it now for us to understand things which but a short time ago seemed impenetrable mysteries, namely, why any diseases, like variola and scarlatina, so rarely flourish twice in the same body; why certain persons or families are more smitten by these diseases than others, and, again with such varying severity in different cases, or why multitudes are wholly insusceptible to them; and, lastly, they surely afford grounds for hope that with the progress of knowledge by observation and experiment we may ourselves add seemingly insignificant ingredients in kind or amount to the fluids or tissues of the human body, and which, nevertheless, may be wholly protective against the dread growth in us of a self-multiplying invader.

As we have remarked, such observations only show how infinitely different the endowments and the conditions of life, as well as the *forms* of life, must be in this vast living world which is opening up before us. It can be regarded, therefore, only as extremely rash in any one, with such facts in view, to deny that some of these forms may come into us from our surroundings and find the conditions for their multiplication in our bodies enough seriously to interfere with health—in other words, to cause disease. Moreover, as different species, with different, but specific, workings, are known, so we cannot, likewise, refuse the conclusion that each supposed organism after its entry, will work in its own way, and therefore produce its own kind of effects or developments. But when you have said this, you have admitted the whole that need be admitted to account for our specific human diseases—that is, why small-pox generates only small-pox germs and develops only as small-pox, and scarlatina, scarlatina, and so on to the end of the list.

But our own clinical experience, with which every educated physician is familiar, enables us to approach this subject from quite another side, and yet thereby arrive at the same conclusions.

For what, we may ask, is disinfection?

One of the speediest ways of answering this important question is to cite some of our most efficient disinfectants and consider for a moment how they come to be so, or, in other words, how they act. We begin with cold. When a city in our country is visited with the scourge of yellow fever, the weather reports are anxiously inspected in hopes of hearing of the approach of a cold wave. With the first frost yellow fever literally dies, even sooner than the tomato vine succumbs to its hoar enemy. Frost is killing to both equally. Let there be cold enough, that is, let us have ice, and, as we remarked, the carcasses of mastodons will remain undecomposed for untold centuries. But, on the other hand, when I was down at the Quarantine of New York, we destroyed yellow fever by heat.

We were never afraid of persons sick with yellow fever, for there is no case reported anywhere of a person sick with yellow fever giving the disease to any one else, any more than a patient with ague ever gives the ague to others. What we dreaded about the sick or dying with yellow fever was their clothes or any articles of bedding or of silk, woolen or cotton fabric, and these we endeavored always to burn up. I have frequently had my clothing spattered with black vomit, but no more feared it than any other vomit; but nothing could have hired me to accept the gift of a bunch of cigars with its silk ribbon if it came from an infected ship. Now, when the articles of clothing were of too great value to be summarily consigned to the great iron scow where we kept up a daily blaze, we had them carried by men who had had the yellow fever to a row of iron ovens, where they were subjected to a dry heat of about 300 degrees, and the next morning they were taken out perfectly disinfected. Therefore heat is just as good a disinfectant as the opposite, cold.

Again, we all know what a great disinfectant ventilation is—that is, a supply of fresh air in great quantity. But no air at all is equally good, for we can put up meat and vegetables and fruit in cans from which all air is expelled, and then hermetically sealed so that no air can get in, and then we can send these perishable things and open them in Africa or China and find them sweet and eatable. Again, cleanliness is a great disinfectant; but this means water, and still more water, if we are to be clean or have any thing clean. But, on the other hand, great dryness is also an admirable disinfectant. In the dry air of the Colorado desert, and in the uplands of Arabia, the carcasses of animals will lie for days without smell of putrefaction, slowly desiccating, it is true, but not putrefying. Now, how are we to explain these familiar facts that total opposites can be the same thing namely, disinfectants? Can we so disinfect a true poison, for example? There is that ill-smelling and highly poisonous gas, sulphuretted hydrogen, for instance. If we took a jar of it and put it in ice, would it cease to be sulphuretted hydrogen then, or would it be destroyed in the oven heat which destroys yellow fever? If we took it to the moist air of England, would it change there, or if we opened the same jar in Colorado would it have lost its fragrance there? We know that none of these experiments would affect a poison in anywise. But when we turn to any thing living, then just these same opposites may be made to kill. Any thing that lives and grows must have its own carefully adjusted medium between extremes. Too much cold or too much heat can always be made fatal, however varying the degree of either extreme which may be necessary in different growths. Many growths are quickly drowned by too much water, or even by too great moisture; others, again, succumb quickly to too great dryness, and we are all familiar with the fact that too free a supply of oxygen, or, in other words, letting in plenty of fresh air, will rapidly destroy the mildew which has been growing luxuriantly in the limited oxygenated air of a close and damp compartment.

Equally instructive with these general disinfectants which nature furnishes us so freely do we find the study of those disinfecting agents which we make use of artificially. We will begin with one of the cheapest as well as one of the best, namely, lime. This is a powerful caustic alkali, which acts as a disinfectant mainly on account of its strong affinity for watery vapor. Unslacked or quicklime will take up 1,600 its own volume of watery vapor, and yet remain apparently as dry a solid as ever. Meantime, however, it is becoming, in chemical language, hydrated, or, as we ordinarily term it, slacked. Now, the interesting point is that lime prefers to get its water from the delicate tissues of fungi like mildew, etc., where the water exists in a state of molecular subdivision to water that may otherwise be nearer to it. If, for example, we put a saucer full of water near a piece of quicklime on one side, and on the other side of it a piece of dough covered with mould, the fungi of the mildew shrivel up instantly from being cauterized to death by the abstraction of the water of their cells, while the water in the saucer is not yet diminished by a grain's weight. The lime, moreover, while it is being hydrated gives off a large quantity of heat, which generates currents of air about that bring down the spores of fungi floating in the air in contact with it, and thus acts almost as surely as diffusible disinfectants do. On this account it has been estimated that a quarter of a pound of lime is sufficient to purify the air of an apartment twenty-eight feet square for twenty-four hours. But this fact proves that this disinfectant cannot act by chemically changing the air itself of the room, because it does not itself mix with the air of the room, and if we tested that air we would find it to contain just the same amount of nitrogen and of oxygen which any other air contains.

Another disinfectant, of a totally different description, and which differs as much from lime in the mode of its action as it differs from it in color, is charcoal. Charcoal operates by means of its curious physical property of absorbing gases and then emitting them again on slight variations of temperature. Freshly prepared charcoal can thus take up ninety times its own volume of ammonia gas, thirty-five times its own volume of sulphuretted hydrogen, ten volumes of oxygen, two volumes of nitrogen and two of hydrogen. But, like lime, it prefers to get both its oxygen and its hydrogen from the water of plants; and, moreover, when it sets its absorbed oxygen free again, the oxygen is in what is called its nascent state, where it acts much more powerfully than in its ordinary condition. On this account charcoal is an invaluable agent for keeping drinking water pure from the growth of cryptogamic plants, and but for its use it would be difficult to carry the water in the tanks of ships if they are long exposed to the air. Charcoal can subserve this useful purpose when no other disinfectant can, because it is itself totally insoluble, and hence cannot impregnate the water as any other disinfectant would.

Wholly different from lime or charcoal either is the great carbolic acid class of disinfectants. Carbolic acid does not disinfect by any chemical property whatever, properly speaking, but by being a virulent poison to all vegetable and even insect life. Twelve grains of it injected into the arteries of a corpse will prevent its decomposition for a number of days, and a stick of wood soaked in a solution of it of the strength of one drachm to one ounce will not be attacked by rot for years. But organic chemistry shows us that carbolic acid is only one of a multitude of substances that are very closely allied to it in composition, and which are found throughout nature in the secretions of various plants, evidently for the purpose of protecting their tissues, but notably their seeds, from the attacks of insects or of fungous parasites. Thus the whole class of spices like cinnamon, ginger, pepper, oil of wintergreen, peppermint, etc., can now be made directly from coal tar, and this fact, moreover, explains the use of these substances from time immemorial for the pickling of either fruits, vegetables or meat. It also explains the uses of wood smoke for preserving our sides of bacon and our hams, as well as it explains how we can more effectually disinfect, than by any other measure, the hold of a ship from yellow fever by fumigation, which relentlessly follows the last germ of the disease into the remotest nook or crack of the vessel and poisons it to death.

A recent advance of organic chemistry has also revealed a fact of great importance, namely, that our invaluable medicine quinine unquestionably belongs to the carbolic acid group of bodies. This will appear to you at once when you recall that before quinine or Peruvian bark was introduced into medical practice, willow bark was the most extensively used of all remedies against intermittent fevers. We now know that the medicinal properties of willow bark are due to the presence of salicin, from which salicylic acid was originally made. Salicylic acid is also largely present in wintergreen, and until lately was manufactured from that plant. But salicylic acid and quinine are so closely related that full doses of each produce very analogous symptoms, such as ringing of the ears, deafness, palpitation of the heart, etc. But salicylic acid now is no longer extracted out of willow bark, because it can be made so much more cheaply from carbolic acid itself, and hence it is very reasonably hoped by many chemists that ere long our supply of quinine will come from the coal tar of our gas works, instead of from the distant and limited groves of cinchona trees on the Andes.

I need not suggest to physicians the wide applications of this class of disinfectants, but I only wish to say that we must not fall into the common error that this class will disinfect every thing. It is daily found in experiments that bacteria are as varied in their susceptibility to destructive agents as they are varied in specific properties or actions. Some are wholly unaffected by certain disinfectants which are speedily fatal to others; and it behooves us, therefore, to apply ourselves to the discrimination of the application of disinfectants as we would to the application of any other varied kinds of remedies. Thus it is evident by experience that the chief uses of the carbolic acid family, so to speak, are against all morbid conditions where suppuration is going on. It is the disinfectant, therefore, of surgery; and I need not more than mention what a wonderful saving of life has already been secured by its free employment in our hospitals in preventing deaths from pyæmia after operations and in arresting the spread of septic infection. Salicylic acid and quinine, moreover, show us that it is from this order of agents that we are to expect our most potent means of disinfection from malarial or miasmatic diseases.

But experience has already demonstrated that against the communicable diseases carbolic acid has scarcely any power. I have repeatedly witnessed its fullest employment in diphtheria fail, apparently, altogether in either modifying the disease in the patient affected or in preventing the spread of the disease to others. Against this order of diseases, however, we fortunately possess a very powerful resource in the chlorine class, which is composed of the substances, chlorine, iodine with iodoform, bromine, and sulphur. This class of disinfectants act in a totally different manner from carbolic acid, this, however, being due to their intense affinity for hydrogen, to obtain which they promptly decompose the water of plants to form hydrochloric, hydroiodic or hydrobromic acid, and which, so doing, moreover, sets free that active disinfectant, nascent oxygen. I hope that the profession will soon wholly abandon the routine use of carbolic acid, and attack small-pox, scarlet fever, measles, diphtheria, malignant dysentery, and similar spreading diseases, by the free use of these disinfectants not only externally, to extinguish the diseases and prevent their spread in families, hotels and public institutions, but use them, as well, internally as medicines. Chlorine and bromine, indeed, are the only disinfectants which can be taken internally in large quantities without poisoning, and I have no question that many low forms of fever poisoning might be greatly benefited by their faithful administration.

Time forbids our further extending these allusions to disinfectants, though we would like to refer to the potent activity of the corrosive sublimate in certain conditions, as well as to the uses of the permanganate of potash; but what we would seek to emphasize again is that the study of disinfection serves only to show more and more clearly that the things which are destroyed by disinfectants cannot be inorganic or physical agents, like gases or vapors, as is implied by the term miasm, nor lifeless agents like poisons. Only the laws of life can explain the laws of disinfection or direct the proper practical application of those laws; and hence to render this last point plain, namely, the practical working of these principles, let us briefly refer, in conclusion, to the diseases which come within the province of our subject, namely, "The Germ Theory of Disease."

According to these views all diseases may be divided into two great orders, namely, the developmental and the extraneous diseases. The developmental diseases are those which arise from some functional or textural derangement of the body itself. Thus, all inflammations which arise from exposure of the body to uneven temperatures, for example, like the catarrhal inflammations of mucous membranes, etc., come under this head, and so do textural and visceral degenerations, like cirrhotic diseases of the liver, Bright's diseases of the kidneys, sclerotic degeneration in the nervous system, or diseases from perversion of the secretions, all functional nervous maladies, epilepsy, and, finally, all simple visceral changes, as diseases of the heart, blood-vessels, many skin diseases, etc. For this order of maladies it may be said that the system itself is responsible, often because it is disposed to them by hereditary tendency, or else they have been acquired by some fault in the bodily habits, or else they may be simply due to the advance of old age. The other order, or the extraneous diseases, on the other hand, are essentially of the nature of accidents. Thus, one man may contract a small-pox just because he happened at a particular time to be traveling in a train, and for no other reason; just as another man may have his leg broken because he happened to be on a particular train, and for no other reason. In each case the misfortune was in nowise due to the condition of their respective bodies, but to where they happened to be. In the same fashion, also, a man may fall sick of ague, just because he happened to go where ague was. Whether he was of a strong or of a weak frame, it is certain that if he had gone in some other direction than where malaria prevailed he would not have had ague. Now, it is against this great class of extraneous or accidental diseases that we must use the right remedies, just because we have recognized what our enemy is, and that we may be always able to recognize them, we would classify them into two great divisions—first, the communicable diseases, and, secondly, the miasmatic or malarial.

The communicable diseases may be defined as those affections which spread only from persons to persons—that is, their source in any given sick one is invariably from some other human or animal body affected by them. As we have remarked before, we prefer the term "communicable" to the term "contagious."

This class may also be subdivided into the specific communicable and the septic communicable. The specific communicable are so named because they never vary in like producing like. Thus, small-pox never produces any thing but small-pox, and cannot produce scarlet fever, any more than potatoes can produce any thing but potatoes, and not beets or turnips. The septic communicable, on the other hand, while highly communicable, yet seem, at best, on the surface, to give rise to rather different sorts of developments. Thus, if a case of erysipelas be admitted into a hospital, it may give rise to pyæmia, or puerperal fever, or trismus neonatorum, according as the infected open surface differs.

It is probable, indeed, that the agent is one and the same in these affections, however different its developments may be in different patients, but, owing to these differences, we prefer to place it in a class by itself from those communicable diseases which always produce their own specific kind of manifestation, and no other.

For the second order, or the malarial, unfortunately we have no correct name at present. The names themselves imply bad air or a malignant gas, but it is evident now that malarial disease, in its most pronounced forms, may be contracted from bad water, as well as from bad air.

The distinguishing characters of this order, however, are easy to point out, namely, that the agent has its origin not in a humna or animal body, but in a place or thing. Yellow fever, for example, cannot, as we have remarked, be caught from anybody, but it is quickly contracted from things.

Now, against both these orders of disease we must define clearly our preventive and our remedial measures, and they are summed up in the word *disinfection;* and when we consider how multiplied and how varied are the means for the employment of disinfectants, even as medicines, on the one hand, and what a flood of light modern research is throwing upon the laws which govern the development of these diseases, we should feel glad that we have been born in these latter days. It is impossible to doubt that we are but just beginning in our knowledge, and soon that knowledge is greatly to be increased as to the "how," so to speak, both of these diseases themselves and the "how" to deal with them, and that ere our youngest alumni attain the experience of ten or twenty years in the practice of our blessed profession they will be armed with weapons fully fit to cope with many of the most fell destroyers of our race.

Gentlemen, it is a good thing to be a physician; it has been good always, because our aim has always been a good one, and like all good aims God finally rewards their pursuit beyond first hopes or expectations.

Meantime I am obliged to close without alluding to the identification of special diseases already made by microscopic research. This would require a lecture by itself, and a good long one too. When we simply say that the microscope has undoubtedly seen and unerringly detected consumption, the world ought to be more startled than by the announcement of a new illuminator or of a new motor. Who can predict the benefits that may come from this discovery and compare them with any invention which, at best, can only minister to physical comfort, but nothing to a trembling or aching heart? Let others contribute their mechanical gifts to humanity—all praise to them for all such contributions—but give me, instead, the glorious joy of him who can go about armed anew to heal the sick.

BEE STINGS.—Paul Bert determined that the poison of certain hymenoptera was acid, but contained an inorganic base. Carlet now finds (*Comptes Rendus*, 99) that the poison is secreted in two sacks, one containing acid matter and the other alkaline, and the acid predominating in the mixture of their contents. Neither fluid alone produced death in insects inoculated with it, but the mixture is deadly. Is the same true of the venom of serpents?—*St. Louis Med. and Surg. Jour.*

CONCENTRATED FOOD.—One of the most effective combinations in dyspepsia, cholera infantum, constipation and chronic diarrhœa, and all diseases resulting from imperfect nutrition is Maltine with pepsin and pancreatine, containing three of the all-important digestive agents, diastase being one of the constituents of Maltine. Maltine may be said to consist of about eighty per cent. of pure food in its most concentrated and assimilable form. This eighty per cent. may be divided as follows: Five and a half per cent. of flesh-formers; seven per cent. of heat-givers; two per cent. of bone-formers; add to this the diastase, which imparts to it the curious power of digesting all farinaceous food outside itself, and we have in Maltine a valuable adjunct to our invalid diet.—Leicester & London, Jan. 1, 1885—*Midland Medical Journal.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

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JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. MAY, 1885. NO. 5.

MEDICAL NEWS.

MEDICAL SOCIETY OF OTSEGO COUNTY.

The regular quarterly meeting was held at the residence of Dr. E. E. Houghton, Schenevus, April 21.

The appointed essayists being absent, no essay was read, yet the meeting was an entertaining and profitable one. After the relation of interesting cases by the members, the subject of

LEMONS IN BRIGHT'S DISEASE

was discussed. It was shown that patients who have the symptoms of the disease strongly marked not only in many instances live for a long time, but make an apparent recovery.

Dr. H. W. Boorn (A. M. C., '66) cited the case of a man who had, as he thought, all the symptoms of the disease last autumn, his urine under heat showing that it consisted almost wholly of albumen. This patient having a desire to eat lemons, began eating them to an extravagant extent, eating as many as six or eight a day. At the present time he is about his business as a small peddler, and his urine examined this day shows no albumen whatever.

The subject of the

POST-PARTUM TREATMENT

of cases of labor was taken up, and while it was unanimously agreed that cleanliness, with watchfulness, was important, it was thought to be by no means necessary in every case to resort to uterine injections immediately after confinement. Indeed, the opinion was expressed that it was an expedient not altogether unattended with danger. Dr. J. H. Martin, of Otego, strongly urged the importance, and showed the good results, of vaginal injections during the lying-in period. A more or less denuded vagina, with perhaps injury to the external parts, may be as likely to furnish lodgment to poisonous discharges as the internal surface of the womb.

The annual meeting will be held at Cooperstown, July 21.

O. W. Peck, M.D., *Secretary*, Oneonta.

EUROPEAN MEDICAL STUDY.

London, England, *March* 17, 1885.

A. Van der Veer, M.D.:

The last time I saw you I told you I expected to go to Europe in July. I did not get away till August 30th. I arrived in London September 10th. I stayed in London one week, and then took a trip up through Scotland, visiting Edinburgh and Glasgow. On my return to London I settled down to study. I have seen Mr. Thorington operate at the Samaritan Hospital several times. I think I have had the pleasure of seeing about all of the fine surgeons of London operate. I left London for Vienna November 14th. I found it very hard work to understand the German language. I started out with the resolve that I would conquer the language or starve. I did not have very much trouble in following the lectures after the first four weeks. While I was in Vienna I took touch courses from Prof. Billroth's and Carl Brown's assistants. I also took courses of Kaposa, Carl Stoerk, Schintzler and Politzer, and all their lectures and operations were very fine. I saw Prof. Billroth make five sections of the stomach, of which three were perfectly successful. The other two patients died I think on the third day after the operation. I think Vienna is the best place to study medicine, rather than London. It takes a man half of his time to get from one hospital to the other in London, whereas in Vienna his work is all together. There I could commence in the morning at eight o'clock and work till six at night and lose but one hour for my dinner. Here I can do nothing in the morning but attend the Moorfield Ophthalmic Hospital. The operations in all the other hospitals commence at half-past one in the afternoon. In the evening I can attend good throat clinics. Your letters have been a great help to me. I assure you I appreciate your kindness. * * *

Yours truly,

H. H. Smith.

[Sheffield Mass.; A. M. C., '73.]

Dr. Edmund F. Bronk ('84) returned to Albany, May 25, after a year's absence in Europe devoted to the study of the throat, etc.

ALBANY
MEDICAL ANNALS:
A Journal of the Medical Society of the County of Albany.

VOL. VI. JUNE, 1885. NO. 6.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY—VICE-PRESIDENT'S ADDRESS.*

BY T. K. PERRY, M.D., ALBANY.
Albany Medical College, 1874.

Mr. President and Gentlemen:

A long residence in our city, an acquaintance with most of the prominent physicians of a decade since, a personal knowledge of our public medical charities which antedates the oldest, save one, and a membership in this society of nearly ten years, must be my apology for detaining you with a brief retrospective.

As early as 1871 I was an occasional visitor during the sessions of this society, and well do I remember the character of those meetings, and especially the participants. There were to be seen and heard such men as the McNaughtons, Armsbys, Huns, Baileys, Boyd, Vander Poel, and a host of others noted in their profession. They were the professional giants of that day — the Nestors of this society. The society at this time numbered about a hundred to a hundred and ten; this number included all classes, active and honorary. Of this number fully seventy per cent. were men along in years — forty and upwards. But time flies, and swiftly, and the realities of the to-days have no more surely given place to the almost forgotten memories of yesterdays than has the complexion and composition of this society's membership undergone transformation in the few years just passed. The familiar landmarks characterized by the rugged form, furrowed cheek and silvered locks have slowly disappeared; and, although a sprinkling of bald pates greets the eye in to-day's assemblage, they are no more a criterion of age than sagacity, and we are left to conclude, therefore, that the society is renewing its youth. The record to-day shows about a hundred and forty members, scarcely thirty of whom have passed their fortieth birthday. The diagnosis is easy and evident. The Albany County Society, one of the oldest in the state, if not in the country, is a society of young men. The prognosis is unmistakable and good. The therapeutic indications may be summed up in a word — "work," administered in good old-fashioned, square-toed doses.

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* Part of an address delivered in Alumni Hall, Tuesday, May 12, 1885.

After some humorous remarks on the office of vice-president, Dr. Perry proceeded:

And now, gentlemen, permit me to call your attention to the following

OBSTETRIC NOTES,

which I have arranged in text-book style, choosing Cazeaux for data, etc.:

In August, 1874, I attended my first lying-in case, and in the eleven years which has elapsed I have confined 565 women at or about the full term of pregnancy, with the following results: Males, 300; females, 265. Vertex presentation, 550, or 55-56 of whole, a little greater than tabulated statistics, which give 19-20. Of these the occiput has presented in some one of the recognized positions 546 times, the face 4, this latter in each case conforming to the mento-iliac anterior. The pelvic extremity has presented 10 times or one in 56, which is considerably less than the usual average, 1 to 35. Of lateral plane presentations there have been 5, or 1 in 115, statistics giving 1 to 230. Of double births there have been 6, and triplets 1. This latter phenomenon is of so rare occurrence and the features of the case were so out of the ordinary that I reported a synopsis of same for The Medical Annals [Vol. V., 1884, p. 177]. It is said to occur but once in 37,500 labors, and it is indeed a singular sight to witness. Prolapse of the funis has taken place in 4 cases, or one in 140, as against an average of 1 to 282. As before remarked, statements like the above amount to nothing practically, and only go to prove the very great difference in individual experiences.

Of the many accidents and complications which attend the pregnant and lying-in, it has been my good fortune to have escaped the greater number. Those that have fallen to my lot I might mention under the heads of puerperal hemorrhage, eclampsia and the use of forceps.

I have had a total of ten cases presenting abnormal losses of blood during the pregnant state, and of this number five have been well-marked instances of central implanation of placenta. Three of these are sufficiently important to narrate, and their histories are as follows:

Was called in June, 1879, to see a patient who had been the mother of eighteen children, and had never been attended at such times by a doctor. It was supposed that her waters had broken, but as she seemed so faint they deemed it best to summon a physician. I found that it was a case of placenta prævia centralis, and that the hemorrhage was simply frightful. I made all due preparation for the trouble we had in store for us, and proceeded to ascertain position of child. Found it to be a right lateral plane position, the hand and arm appearing in the vagina immediately on my separating a portion of placental mass. I think I realized fully the extreme danger to both my patient and her child, and, having fully explained matters to husband and friends, I administered chloroform, and, after some time and not a little difficulty, succeeded in performing version, delivering her of a very large male child weighing thirteen pounds and bearing evidence of having been dead some hours. Patient made a slow but sure recovery, although a troublesome cough persisted.

Some thirteen months later I was again called to see the same patient, and found her pregnant for the twentieth time and well advanced. Learned that some blood had been seen from time to time during the week, and I at once ordered her to bed and proceeded to make a careful examination, and at the inner terminus of the almost obliterated cervical canal the finger distinctly felt the soft placental tissue. Began with half-drachm doses of ergot at once, given every half hour, and with two fingers in the os endeavored as rapidly as possible to facilitate labor. During the two or three hours which followed there was considerable, though not alarming, hemorrhage, and I had the satisfaction by that time of being able to insinuate my hand within the uterine cavity and to fish for the feet. My efforts were successful, and in a reasonable length of time I had delivered her of a female child weighing ten or twelve pounds, alive and kicking. A profuse gush of blood followed the extraction of the child, and with all came the placenta, the womb contracting nicely. Up to this moment the patient seemed fairly well, and after caring for the little one I turned my attention to her. She seemed perfectly conscious, but was breathing rapidly and labored, and complained of some pain in her side. I had hardly noted these points when evidences of syncope were manifest; the eyes were fixed, pupils dilated, muttering and incoherent speech, some rolling of the head, and it was all over. There was no time given even for stimulants. The child survived about seven months, dying eventually from idiopathic eclampsia.

In November of the same year I was hastily summoned one night about eleven o'clock to see a patient whom I had before visited, and who, I had every reason to believe, was the victim of a placenta prævia. She had reached full term, so it was thought, and when I saw her labor was in progress. She had been flowing at intervals for about three weeks, but would not listen to my advice to go to bed and keep quiet, and was, as a matter of course, very much reduced An examination revealed a central implantation of placenta, and an occipito-anterior position existed. In about two hours the child was born, and I then found that baby No. 2 was in existence, and was presenting by its left lateral plane. However, as neither child was very large, I had no trouble in version, and soon delivered her of the second child. Baby No. 1 died during the night, and No. 2 is alive at the time of writing. And now about our patient: The hemorrhage, as before remarked, had been in progress for three or four weeks, and at this time was very considerable; still, it seemed as if all might go well, and for about an hour it did. At about this time she began complaining of pain in the side, shortness of breath and great thirst, and in a few minutes speech became indistinct, and before a clergyman could be had she breathed her last. The uterus had contracted well, and there was only a fair amount of oozing. Death probably resulted from cerebral anæmia, producing paralysis of heart's action.

But a short time after this case I was called to attend a former patient, who had reached term and was in labor. Found a central implantation of placenta and a very profuse hemorrhage in progress. Child was presenting normally. Gave ergot freely, and endeavored to introduce my hand into the os. Five or six hours elapsed before the head made any progress, and in the meantime a large amount of blood had been lost. When the head started, it came right along, and there was no further trouble. The child had evidently been dead for some time. My patient survived after a long and tedious illness.

Of eclampsia, its cause, pathology, etc., I will not attempt to speak. If you will permit me, however, I will draw a picture of its practical aspects as illustrated in four cases which have come under my observation.

On November 16, 1881, I confined Mrs. S., a healthy-looking, well-built brunette of 21 years. It was her first pregnancy, and the preceding months of probation had been filled with nothing of interest, save pleasant anticipations. Her sickness covered a total duration of about ten hours, and was terminated by forceps. No untoward symptom occurred up to time of my leaving the house about 10 P. M. Was called at 3 A. M., and learned "she had had a fit." Found her insensible, pupils dilated, respirations 35 and pulse 130. No unusual hemorrhage, no vomiting, nothing to have attracted attention to such a state of affairs, had existed prior to conclusion, and yet I could not think it any thing but uræmia. Catheterized her at once and obtained about four ounces of very dark ammoniacal urine, which I found later to contain a small amount of albumin. The bowels had been more or less constipated for months, but there had never been any amount of œdema of any portion of body. Ordered an enema of one quart of warm water, and prescribed chloral, bromide of potassium and tincture of hyoscyamus. Remained with her the remainder of night, and, save for several slight twitchings, there was no return of convulsions, and by daylight she had become somewhat conscious. Still talked and muttered; her face was flushed almost to turgidity; pulse and respirations were about as before. Would take medicine and drink, but seemed to pay no heed to any thing around her. Toward midday she lapsed again into unconsciousness and breathed with a stertor, frothy mucus accumulating in the mouth. I had begun earlier in the day the application of ice to the head, and this I continued, adding to my previous prescription tincture of veratrum viride, ten minims every hour. She passed the night without any severe paroxysm, but was only partially conscious at my morning visit, and her respirations were sighing, pulse 125. A brother of my patient, who is practicing in an adjoining county, was summoned, and, fully concurring with me as to diagnosis—uræmia—no change in treatment was made, save to discontinue chloral and use only bromide and tincture veratrum. Venesection was suggested, but was not resorted to, as patient's condition seemed improving. She entirely recovered, nursed her child, and exhibited no sequelæ.

December 11, 1882, confined Mrs. J. with her first child; labor short and in every respect normal. My previous acquaintance with this patient extended back about three months. Œdema and albumin were early developed, and during the last two months she was fairly water-logged, and obliged to keep her bed. Notwithstanding all this, she apparently enjoyed excellent health, ate and slept well, had very little headache, passed water freely, etc. Abundant lithates and phosphates in urine, always more or less albumin and some broad hyaline casts. Her child was born about 11 A. M., and I was away in half an hour, leaving her in most comfortable shape. Was summoned about two hours later, and found her in convulsions, she having had, so the nurse informed me, about half a dozen within an hour. I at once catheterized her, and found about two-thirds of a pint of dark urine, then injected quarter of a grain of morphine and ordered ice to head. Saw her about three hours later and found her unconscious. Ordered bromide of potassium, sulphate of morphia and tincture of hyoscyamus; had a large rectal enema administered and drew off some four or five ounces of urine. Was still unconscious at midnight, pupils dilated, respirations 25 and sighing, pulse 120. As she would swallow a very little, we continued our treatment and also the ice. Had no farther convulsions, began to recognize people and things during the next twenty-four hours, and finally, after a long, tedious convalescence, recovered. Albumin was present in the urine for weeks, and the œdema of lower extremities disappeared very slowly.

On the morning of January 27, 1884, Mr. C. called on me to prescribe for his wife, who, he said, was suffering from a violent headache. I learned that she was about eight or eight and a half months pregnant, had borne some six or seven children, had never had any special trouble at such or any other time, and that her general health was good. Gave him prescription of bromide of potassium and tincture of belladonna, with a little codeia, and dismissed the case from mind. About midday I was called to his house, and found my patient sitting up with head enveloped in hot cloths, her body swaying to and fro, eyes staring and every evidence of most violent pain. Her temperature was 101°, pulse 110, extremities quite œdematous and cold. Ordered her to bed, gave bromide of potassium, chloral, tincture of hyoscyamus and tincture of veratrum viride, and procured some urine, which I found on examination to be highly albuminous. An examination per vaginam revealed an almost obliterated cervix and a most rigid os. At 1 P. M. was hastily summoned, and found her in convulsions; they were most violent, and succeeded one another in rapid succession. Injected quarter of a grain of morphine, and ordered two-grain ergotine pills every two hours. She became somewhat conscious about 8 P. M., and remained quiet for an hour or more, although her breathing was labored and face flushed. Had tried to keep ice to her head, but could not because of her violent contortions. Gave her another quarter-grain injection and continued ergotine. Spent most of the night with her, and think she had twenty or thirty seizures, and all were most violent. She did not at any time recognize people or things, and would only swallow with the greatest difficulty. About 7 A. M. evidences of uterine contractions became manifest, and in the next three or four hours a dead child was delivered, the patient remaining convulsed during the entire period, and quieting but little for six or eight hours afterwards. From this time no further seizures occurred, but she remained comatose for the balance of the day and night, and only became conscious to become irrational, spitting, grinding her teeth, pulling her hair, screaming and indulging in the most horrible profanity, coupled with the vilest of vile language. She would swallow nothing, but spit at her attendants and all over herself, and it was simply out of the question to attempt medicine either by mouth or rectum. I accordingly, at intervals of about four hours, injected quarter of a grain of morphine, for about forty-eight hours. As she had by this time become somewhat rational, no further therapeutic measures were adopted. She made a perfect recovery in the month following, and her mind seemed in no way disturbed.

About 5 A. M., April 1, 1884, was called to attend Mrs. F., in her first confinement. She was a healthy looking brunette of

22 years, and had been married scarcely two years. She had enjoyed uninterrupted good health, having visited and shopped the very day preceding her labor; had never suffered from headache, and was able at all times to wear her usual shoes or slippers. The sickness was very short and perfectly normal, and I left for my home in less than two hours. Had scarcely breakfasted when a messenger requsted my immediate attendance on this same patient, and I was no more surprised than horrified when, on entering her apartments, I discovered her in convulsions. The first one had made its appearance about one-half hour following delivery, and had been rapidly succeeded by others. Injected at once a third of a grain of morphine. No effect after an hour; dose repeated; became more quiet in about twenty minutes, although breathing stertorously. After a sleep of three or four hours she awakened perfectly conscious and with no knowledge of her trouble; did not even know she had had a baby. Remained conscious for balance of day, but lapsed into semi-coma during the evening, and by midnight the convulsions were as serious as ever. Used the morphine hypodermatically, in one-third grain doses, every three hours. After six or eight hours convulsions ceased, and sleep succeeded. When she awakened, she seemed perfectly natural for nearly twenty-four hours, taking considerable nourishment and some morphine and bromide. The convulsions did not return, but symptoms of mental aberration supervened, and following this the most violent maniacal state I think I ever witnessed. A consultation was held, but my patient died exhausted on the fourth day following her confinement. I had catheterized her regularly during her sickness, and always obtained a fair quantity of very clear urine, which contained only a small amount of albumin. The bowels had been moved by enemata once each day. I look back to this case with a good deal of wonderment and not a little disappointment, as I cannot now, nor could I then, understand the whys and wherefores.

I come now to speak of the use of forceps. In the class-room I was taught that óbstetric forceps were undoubtedly perfectly proper in their place, that they were the inevitable outgrowth of time and necessity, and that they were, or should be, constructed on purely mathematical principles, but that they were, however, merely works of art, and only intended to fill out, as it were, to completeness the physician's armamentarium. Taking all this for granted, therefore, I did as most students of my day—provided myself with a long Hodge forceps, and, locking them in my desk, felt perfectly secure. How much one learns as the years go by and the practical field widens! The long Hodge, to be sure, have lost little of their brightness, and their resting place is quite secure, but they have been supplanted in their owner's affections by another, known as the short forceps, and without these little and tried companions I shudder to think of the hours and hours I would otherwise have spent in the lying-in room patiently waiting for nature's laws to be fulfilled. I have applied the forceps a total of eighty-five times, and have never in any instance marred or mutilated the child, and but once has it fallen to my lot to suffer the mortification of a ruptured perineum. I have come to feel as insecure when attending a confinement call without my forceps as would the practical surgeon in an emergency minus his operating case.

And now, gentlemen, having labored for some moments to impress you with my greatness professionally and my wonderful skill obstetrically, let me not make my final bow without one more burst of egotism.

The trend this time is in the direction of sanitation, and is styled "hygiene of the lying-in chamber." Our medical journals fairly bristle with articles bearing on the subject; and, much as has been written, still more will continue to be, for its future is undoubtedly great. But the subject can be overdone and the scientific moral overdrawn, and it would be well for some writers if their practice should be transferred to some small hamlet or less densely populated city, that they might realize from other standpoints the bare-faced absurdity of some of their own statements, to say nothing of their practical impossibility. However, such matter reads well, and theoretically it is all perfectly correct. I remember an old maxim which reads, "There's nothing succeeds like success," and this I make my motto and companion. I attend every thing that I am called to within the legitimate domain of my profession, from scarlet fever to phagedenic erysipelas. I witness, assist in holding, and hold, a fair number of autopsies every year, and all this time keeping right on with my obstetric work without regard. I have never ordered the paper from the walls of the expected lying-in chamber, nor have I ever had them sized with a solution of mercuric bichloride. Neither do I immerse hands or instruments in any disinfectant previous to or during attendance on these cases. I will also add that I have never in a single instance employed intra-uterine injections at such times, contenting myself with simple vaginal douches; and, notwithstanding this very great carelessness and almost criminal neglect on my part, I am still able to hold up my hands for inspection, and find them perfectly clean, washed of even the stigma of misfortune. Not a death has occurred to any patient I ever attended during confinement, save as above reported; and, although I have many times witnessed chill, fever, abdominal tenderness, etc., hot water per vaginam, hot fomentations to the abdomen, diet and anodynes have constituted and completed the treatment and cure.

THE DIAGNOSTIC VALUE OF THE TUNING FORK IN DISEASES OF THE EAR.*

BY T. F. C. VAN ALLEN, M.D., ALBANY.
Albany Medical College, 1882.

The tuning fork and the variance of bone conduction were discussed in 1846, but it was nearly twenty years later when Weber called attention to the fact that a vibrating tuning fork held against the vertex would be heard better in the ear, the meatus of which was stopped by the finger. This was explained by Mach, who suggested that the vibrations were conducted to the auditory nerves by the cranial bones; that such vibrations were, in part, reflected, and escaped from the external auditory meatus; that closing the meatus confined these vibrations, and thus they affected the nerve more strongly than in the unstopped ear.

Politzer, in 1868, called the attention of the profession to the value of the instrument, and soon the following deductions represented the diagnostic value of the tuning fork:

The aerial conduction of vibrations in the normal ear is more prolonged than bone conduction.

Stopping the meatus of the ear decreased the duration of aerial conduction in this ear, while bone conduction was intensified, though the duration was almost unchanged.

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*Read before the Medical Society of the County of Albany, Wednesday evening, April 22, 1885.

Any thing interfering with the action of the conducting mechanism of the middle ear, or obstructing the outward reflection of vibrations, decreased the length of aerial conduction, and increased both the intensity and proportion of bone conduction—as impacted cerumen and the different forms of middle-ear catarrh.

There being no objective symptoms of such obstruction, aerial conduction diminished, and bone conduction diminished, or its proportion not increased, the disorder is with the auditory nerve.

This is rather crudely stated, but is sufficient for our purpose.

All are more or less familiar with bone conduction of sound, as illustrated by the ticking of a watch pressed against the forehead or held between the teeth. The over-lauded dentiphone is a good example.

The intensity of bone conduction varies both with location and circumstances. It is generally more perfect in the young or middle-aged than in the aged, more enduring and intense at the teeth than at the forehead. Temporary interferences are sometimes met with. I remember finding bone conduction, as compared with aerial, less than it should be in a case of slight concussion of the brain. The proper proportion was restored in a few days.

A few words about the instrument. The most generally adopted tuning fork, for diagnostic purposes, is known as "Politzer's," or the "clinical," the pitch of which is about middle "C." This gives 512 vibrations per second.

The ordinary fork produces two tones, a droning *key-tone* and an *over-tone.* This overtone is of higher pitch and very troublesome, for a patient may hear the keytone better with one ear and the overtone the better with the other ear, and thus give confused information as to the results of its application. Politzer overcame this very neatly by placing brass clamps upon the ends of the prongs of the fork. This not only does away with the overtone, but by sliding these clamps upon the prongs we can obtain over an octave of tones. This is a great advantage, as in certain nervous disorders a low note will not be heard when some higher note, or notes, will be, or *vice versa*, and we are thus saved the necessity of having a set of tuning forks.

Let a patient be imaged before us. A vibrating fork is placed against his upper incisors, and he is asked on which side it is heard the more loudly. He replies, "On the left." Now either of two conditions might be diagnosed—that the outward reflection of the vibrations is interfered with by middle-ear trouble; that the external auditory canal is obstructed, or there is decreased bone conduction in the right or opposite ear, due to nerve disorder. Disease of the nervous apparatus is not a common occurrence, and the patient has probably given assurance that only the left ear troubles him, the truth of which can be proven by testing his aerial conduction. So it is safe to infer that there is some obstruction in the middle ear or the external auditory canal. Thus the fork has made a ready partial diagnosis.

Our imaginary clinic must have two more cases, at least, and the next one is extremely deaf; a loud voice must be used to have him hear, and both ears are apparently equally defective. Is this a case of partial nervous deafness, or is it one of middle-ear disease? Again, is it due to both, and is each ear similarly affected? The tuning fork will answer these questions, with a few exceptions, in a very satisfactory manner. Using the tuning fork as before, it is discovered whether it is heard well by bone conduction, the duration and intensity of this conduction, and any difference between the ears as regards these points. We can compare the length of duration with our own bone conduction, and thus make a fair estimate. If the bone conduction is normal, or not much decreased, labyrinthine trouble may be excluded. It must be understood that there is a chance of making an error, for "intermittent bone conduction" does, rarely, exist to a marked degree. We sometimes find cases in which, upon one test, it is discovered that the bone conduction is much diminished, but in which it returns a short time afterward, or is much improved by inflation of the middle ear; in fact, inflation may completely restore it. A number of the cases of the middle-ear catarrhs have more or less diminution of bone conduction, which is restored usually by inflation of the drum cavity. So too much stress should not be placed on a slight diminution of bone conduction when the objective symptoms of catarrhal otitis media are present, or, at least, not before thorough inflation has been resorted to.

The third patient will be one whom all, who attempted to converse with, would pronounce absolutely deaf. Possibly he may have been in this condition since childhood, when he had the scarlet fever, and at the entrance of manhood his friends are anxious to know if he has any hearing power left, and if any thing can be done for him. The tuning fork, or some other means of testing bone conduction, is the only means of testing such a patient. Inability to hear a loud voice does not necessarily mean absolutely inactive auditory nerves. The tuning fork is tried, not only on the incisors, but on various teeth and different portions of the cranium. The pitch is altered, and different tones and semi-tones are to be tried, to discover if there is any bone conduction remaining. Care must be used not to mistake the sensation of feeling vibrations for hearing vibrations; for an absolutely deaf person will feel the vibrations of the fork, the same as he will feel the closing of a door. This distinction is often a rather difficult one to make, and the success depends considerably upon the intelligence of the patient. If it be found that the patient cannot hear the fork, no matter what its pitch or position, and inflation has no effect, we are safe in inferring that the nervous apparatus is temporarily or permanently useless.

There is an annoying condition that quite frequently presents itself, and which interferes greatly with the tuning-fork test. It has received no special name and but slight attention, so far as I am aware. It may be illustrated thus: Some time ago—years perhaps—a patient had more or less trouble with his right ear, and lost much of the hearing power of this ear. He does not come to the physician for this old disorder, but he is alarmed by an impairment of the hearing of the left ear, which is a recent occurrence. It is wished to test the bone conduction of the left ear, but on applying the vibrating tuning fork he assures us he only hears it on the right side. If no questions had been previously asked, and the physician knew nothing of the history of the case, he might be disposed, if the patient seemed intelligent, to conclude that there was labyrinthine disorder of the left ear. When the aerial conduction is tested with a watch, it is found that he cannot hear it at all on the right side, but hears it at quite a distance on the left side. Thus these tests seem to contradict themselves. The explanation is this: The right ear was affected by some middle-ear disease, and the aerial conduction much reduced by the obstruction to the inward transmission of vibration, while bone conduction, by this same obstruction, was rendered abnormally intense. The disorder of the left, or recently affected ear, has probably increased both the proportion and intensity of bone conduction on the left side, but the disease has not produced as great obstruction as exists upon the right side. He therefore hears the vibrations upon the right side alone, because on this side the bone conduction is of much greater intensity than the bone conduction on the left side, which he altogether ignores.

Where the preponderance of bone conduction upon one side is but slight, it may be overcome by moving the tuning fork toward the ignored side, or by closing the external meatus on this side. It is tried, in the illustrative case, upon the teeth of the left side and upon the left temporal region, but it has no effect; it is placed upon the left mastoid, but it is still only heard upon the right side. When studying otology, in New York, I was nonplussed over such a case, and finally gave it up. Dr. Pomeroy placed the handle of the fork in, or rather against, the external auditory meatus, when the patient heard it upon that side. I believe this idea to be original with Dr. Pomeroy; at least I have never noticed its mention by any of our otologists. So far, this manner of applying the fork in these troublesome cases has always succeeded with me. Of course, the same condition may be met with in cases of one-sided deafness, but in these cases the testing of aerial conduction shows normal hearing on the one side, and the knowledge of the bone conduction upon this normal side is not cared for.

Now something about the manner of using the tuning fork. It can be readily seen that a uniform force of vibration is most desirable, but it is very difficult to tap the fork with the same amount of force each time. Only practice will enable the manipulator to obtain even an approximate regularity. The flexed knee seems to be about as convenient and satisfactory a place to strike the fork as anywhere. The instrument requires but a very gentle stroke. In applying it, the handle may be placed against any bony portion of the face or cranium. The usual points are the upper incisor teeth, the median line of the forehead, the mastoid region, and, it may be added, the external auditory meatus.

There are objections to all of these locations. The teeth would seem to offer the best position, but they are so often false that they will not answer invariably. The mastoid has a varying amount of tissue over it, so that the results will vary with the proximity of the bone to the surface. The same objection, but to a less degree, applies to the forehead. The duration and intensity of bone conduction varies considerably at these different locations. Dr. J. B. Emerson, of New York city, made some fairly satisfactory experiments as to the proportion of bone and aerial conduction, an account of which may be found in Vol. XII. of "Knapp's Archives of Otology." His tests of the bone conduction were, unfortunately, I think, made at the mastoid region. He found the average duration of bone conduction, in 50 persons with normal ears, to be 17 seconds, and the length of aerial conduction 34 seconds. It will be seen from this that the fork is heard through the air, when held within about one-half inch of the auricle, double the length of time that it is by bone conduction when the handle is applied to the mastoid region. Some time ago I made a number of tests, and found the proportion of bone conduction to aerial, in the normal ear, to be as follows: Representing aerial conduction as lasting for 100 seconds, the duration of bone conduction was: At the forehead, 35 seconds; teeth, 42 seconds; mastoid, 43 seconds; meatus, 100 seconds; or, bone conduction at the forehead lasts for about $\frac{1}{3}$, at the teeth and mastoid for about 7-16 as long as by aerial, while at the external auditory meatus the duration is about the same.

When it is satisfactorily settled what the average comparative durations of certain sounds, under certain conditions, are, a great forward step will have been made in the science of otology. It is well known that duration is varied, and comparative averages altered, by disease, even though the disorder be but slight. As to the present status of this knowledge, we cannot do better than to refer to Dr. Emerson's article again. Fifty cases of middle-ear affections are tabulated as regards the condition of both the aerial and bone conduction of tuning-fork vibrations, and with these results:

"An 'A' fork (over an octave lower than middle 'C') was heard better and louder by bone conduction than by aerial in every case.

"In 39 ears the upper 'C' fork was heard louder by aerial, and in the remaining 61 ears louder by bone conduction.

"The middle 'C' fork was used for some 39 ears, and with it the sound was heard longer through the bone than through the air.

"The average duration, in 26 ears, for aerial conduction ('A' fork), was 15 seconds; for bone, 17 seconds."

Thus we see from Dr. Emerson's figures that bone conduction has remained almost unchanged as to duration, while aerial has decreased to about one-half the normal persistency.

Dr. Emerson also mentions that "the tones of a strongly vibrating fork of low pitch are normally heard more loudly through the bone than through the air, although they are not heard for so long a time."

The tones from middle "C" up are heard more loudly by aerial than by bone conduction in the normal ear.

To repeat, to some extent, what I have said before: A middle "C" fork should be heard 7-16 as long when held against the teeth as when held near the auricle. Any marked change from this average will indicate some disorder. In middle-ear affections, and stopping of the external auditory canal, aerial conduction will be decreased to an extent in accordance with the completeness with which the middle-ear mechanism is interfered with, and the aerial conduction obstructed. In labyrinth disturbances, which lessen the hearing power, the duration and intensity of bone conduction will be diminished, although the proportion may remain the same.

It is necessary that we should have some accurate knowledge of how age and diseased or anomalous conditions of the bone affect bone conduction.

All will admit the utility of the tuning fork in diagnosis, and I feel sure will also agree that it is destined to become still more valuable to the profession.

There are many questions to be answered in the field of otological diagnosis, and among them I would suggest: How is bone conduction at the mastoid region affected by inflammation of the lining of the mastoid cells, by the presence of pus in the cells, by the condition of hyperostosis, and so on, and is it possible that we may be aided by the tuning fork in diagnosing these conditions? Admitting that each one of Corti's organs corresponds to a certain note, will it be possible to locate exactly both the position and extent of labyrinthine disease by discovering what portion of the musical scale is unheard, or defectively heard?

The careful testing and study of cases, together with post-mortem examinations, will answer such questions.

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THE GOVERNOR AND THE STATE BOARD OF HEALTH.

It is impossible to properly characterize the action of the Governor toward the State Board of Health. The Board made a most careful estimate of the amount that would be necessary to carry on its work during the year. For a state of five millions population it was an extremely moderate estimate that was made by them for the purpose of furnishing expert advice on sanitary and engineering matters. There is hardly another state in the Union, having a state board, which has not appropriated more than the $15,000 asked for here. Neither branch of the legislature had any hesitation in allowing the appropriation, and they did it early and with deliberation. Governor Hill avails himself of the right which is with great propriety given to the executive by the constitution of the state, for the sake of controlling unwise or hasty expenditures, and vetoes this appropriation. For what reason he has done so it is not possible to say. He gives none. He, more than that, gives, by implication, an insult to the Board when he says that the deficiency that is alleged by the board in its regular allowance of $20,000 does not exist. He states that the Comptroller informs him that his books show no deficiency, but he cannot fail to know that this statement conveys a mistruth, if he pays the least attention to what it is his duty to do when he assumes the responsibilities of his office; for the Board's report has explicitly shown, and his attention has been closely drawn to it, that the expenditures of last year were about $2,000 in excess of the regular appropriation; it showed no deficiency in the Comptroller's office only because there was a balance to the credit of the Board from former years. Of course the Comptroller would not pay out money not in his possession. The Governor implies that the Board has falsified its accounts when it asserts a deficiency which he thus says does not exist. We are sure Mr. Hill will find he has made a mistake before the year is ended.

The regular work of the Board is developing every year. Its routine office work is being swelled month by month as local boards of health are formed throughout the state. *Pari passu*, calls for advice, inspection and expert assistance are increasing all the time. The theory upon which the health system of the state has been built up, by which the central Board acts as a vital head, as an advisory resource and a place for record of vital statistics is admirable. Day after day applications are made for help in this direction from local boards and health officers, by which, after a most economical plan, the work is done. The Board needs a corps of sanitary engineers and investigators; it needs chemists and a laboratory for the analysis of water, foods, and the like, all of which should be of the best and supplied without stint to make it what the intent and *animus* of it is. Medical men need not be told that no money could be more economically invested to bring back good returns. Health can be reduced to the estimate of dollars.

All this is for the regular routine work of the sanitary head of the state. But what have we to face as an immediate thing? The cholera is impending—of that we know enough. It is not the largest evil that is threatening. Small-pox is developing alarmingly all around us. It has been prevailing to a great degree in Europe; now it has come to this country, exists in New York, is epidemic in Montreal, and has just broken out in Plattsburgh. Typhus fever is almost equally threatening, and all know how inexperienced the country practitioners are in this exotic disease. All these are liable to appear on the great trunk lines and their branches which cross this state. The regular and uneventful work that comes to the head of thirteen hundred potential local boards of health is very considerable. The additional work that the emergencies of epidemics involve, if it acts up to its full requirements, is a great deal more. The Governor has deliberately cut off the possibility of the State Board from doing this work, and on him must fall the responsibility which he has taken for reasons which he no doubt has, although he has not given them.

BUTTERINE PROHIBITION DECLARED UNCONSTITUTIONAL.

The Court of Appeals at Saratoga, on Tuesday, June 16, 1885, handed down a decision in the case of the people *vs.* Morris Marx, which was prosecuted as a test of chapter 202 of the laws of 1884. This act was "to prevent deception in sales of dairy products," and provides among other things:

> No person shall manufacture out of any oleaginous substances, or any compound of the same, other than that produced from unadulterated milk or of cream from the same, any article designed to take the place of butter or cheese produced from pure, unadulterated milk or cream of the same, or shall sell, or offer for sale, the same as an article of food. This provision shall not apply to pure skim milk cheese made from pure skim milk. Whoever violates the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than $100 nor more than $500, or not less than six months' or more than one year's imprisonment, or by both such fine and imprisonment, for the first offense, and by imprisonment for one year for each subsequent offense.

The defendant, who was arrested in New York for selling oleomargarine, proved on his trial that the commodity was as wholesome as dairy butter, but this evidence was stricken out. This disallowance of testimony, and the alleged unconstitutionality of the law as an oppressive interference with legitimate trade, proved the bases of the appeal. The judgment of the general term of the Supreme Court affirming defendant's conviction under the act is reversed by the Court of Appeals and the law declared unconstitutional. Judge Rapallo writes the opinion, in which the whole court concurs.

Our readers are requested to notice on page 309 *et seq.*, in our October number of 1884, the view which The Medical Annals expressed on this question. The prognosis made at that time is now fulfilled, to wit: To sell butter imitation by the name "imitation," so that the purchaser knows what he is buying, is honest, and, even in the face of this new law, it may yet be shown to be legal.

——Nitrite of Amyl in Opium Poisoning.—The *Therapeutic Gazette*, June, 1885, says a case in *L'Union Medicale*, No. 139, 1884, is "probably without a precedent." The Medical Annals, July, 1884, page 220, dispelled another's misapprehension by reference to The Medical Annals for May, 1882, which contains "Nitrite of Amyl in Opium Poisoning," by Dr. Jno. Ben. Stonehouse, Albany, N. Y.

BOOKS, ETC.

Cholera; its History, Cause and Prevention. By Ezra A. Bartlett, M.D. H. H. Bender, Albany, publisher. 12mo, 105 pp., paper, 30 cents.

A great deal has been printed on the subject of Cholera of late in the journals, both medical and secular. The daily papers, which feel the pulse of public interest on all topics as they are current, permits no issue to lack some record of its latest development or of the last contribution to its history, cause or prevention. There is no question as to the interest felt by the people. Out of all the heterogeneous information and misinformation that is served up to them they struggle to get some clear idea concerning the dreaded disease, the stroke of which they have learned to anticipate.

It was timely to think of preparing for popular use a compact and reliable statement regarding cholera. The people are ready for it. And we think they will find just what they desire in the little monograph before us. The publishers were fortunate in securing Dr. Bartlett for its author, as, in addition to his professional fitness, he has the unusual talent of clear expression, which is especially desirable in a book of this sort; he has learned this as a contributor to popular and scientific journals. Just the right note has been struck by the writer. The dangers of the disease and the conditions on which it depends have been forcibly presented, but, at the same time, the tone is such as to allay panic in the popular mind. The subject is treated in half a dozen chapters. A sketch of its history is followed by the recent views concerning its cause and propagation; then there is a valuable chapter, full of information that the people need, on the prevention of cholera and one on the associated subject of food and drink, contributed by Dr. W. G. Tucker. On the final chapter, on disinfection, the most recent contribution to the subject has been followed, and, while the author would no doubt modify some of the statements if he had at the time of writing the benefit of more recent criticism on the American Public Health Association Committee, still the fundamental ideas are well insisted on and valuable methods suggested.

Dr. Bartlett has struck a happy vein throughout, and made the matter readable, forcible on necessary points and full of information. Not only the people, but the body of the medical profession, will find this handsomely gotten up *brochure* very entertaining and instructive. It is commended by all who are interested in the subject of public health, to whose notice it has come, as of great value in teaching the people. We feel a pride in it as an Albany production, and commend its use to all our readers and their patrons. F. C. C.

ALBANY, N. Y., *Juue* 10, 1885.

My Dear Dr. Bartlett:

I have read with great pleasure the advance sheets of your excellent treatise on Cholera, and sincerely wish that it may carry its lesson into every household.

Temperately taught knowledge of the causes of danger and of the efficiency of simple preventive measures is of the utmost importance to allay the unreasoning popular alarm which often lends added force to epidemic ravages; and such knowledge you have happily conveyed.

Faithfully yours,
(Signed,) ALFRED LUDLOW CARROLL.

MICRO-CHEMISTRY OF POISONS, including their Physiological, Pathological and Legal Relations, with an Appendix on the Detection and Microscopic Discrimination of Blood. Adapted to the Use of the Medical Jurist, Physician and General Chemist. By Theodore G. Wormley, M.D., Ph.D., LL.D., Professor of Chemistry and Toxicology in the Medical Department of the University of Pennsylvania. With ninety-six illustrations upon steel. Second edition. Large 8vo, cloth, pp. 784. Philadelphia: J. B. Lippincott & Co. 1885.

The handsome binding and general elegance of this superb volume first attract attention, and on turning to the title-page the reviewer is pleased to find that an old acquaintance is before him. The first appearance of Professor Wormley's "Micro-Chemistry of Poisons," in 1869, marked an epoch in the history of toxicological literature, for no treatise of its kind in any way comparable to it was in existence, and the work elicited on all sides the heartiest commendation from critics competent to appreciate its value. It is gratifying to know that the demand for so expensive a work on a subject upon which but a small portion relatively of the reading public are interested should have been sufficient to warrant the bringing out of a second edition, and the success of this book—a book referred to as an authority on the subjects of which it treats wherever English books are read—is a source of pride to those who rejoice in the rapidly extending influence which American scientific writers are now exerting.

The work before us is by no means confined to the microscopic study of poisons, but is an exhaustive treatise on general toxicology, in which the most important poisons are considered at length, while those of secondary interest are omitted altogether. It is not an encyclopædia, but rather a series of elaborate monographs embodying the results of a large amount of original research. Much new matter, including many illustrative cases, has been added and old analytical processes replaced by new and improved methods. The chemical nomenclature has been entirely revised, and the book in all respects is thoroughly abreast of the times. The author has retained the English system of weights and measures, but all amounts are stated in decimal fractions of the grain.

After an introduction, in which the causes modifying the action of poisons and the sources of evidence of poisoning are considered, the inorganic poisons are taken up and exhaustively treated. The post-mortem diffusion of arsenic is discussed, and experiments conducted in the author's laboratory are detailed in which arsenic injected into the stomachs and rectums of dogs at periods varying from ten minutes to many hours after death was detected subsequently in the liver, kidneys and brain, the diffusion taking place most readily where the injection was made soonest after death. The presence of considerable quantities of arsenic in certain kinds of glass is pointed out, no less than 0.34 per cent. of metallic arsenic having been found in some American beaker-glasses, and attention is called to the possibility of contamination from this source in toxicological work, though it is shown that there is little or no danger of arsenical glass yielding up any of its arsenic in the ordinary application of Marsh's test, and that mineral acids, ammonic hydrate and sulphide, and various neutral reagents, take up no trace of the poison even when kept in bottles of arsenical glass for long periods of time, though alkaline solutions become contaminated quite speedily, and should be carefully examined for traces of arsenic before being used in analyses for that metal.

The second part treats of the vegetable poisons, and here we find a new and most valuable chapter on Gelsemium, a subject upon which the other standard works throw but little light, and yet a very important topic, since cases of gelsemium poisoning are by no means rare. Dragendorff's method for the separation of alkaloids from organic mixtures is given and criticized; the ptomaines are discussed in the light of the latest knowledge which we possess concerning these rather hypothetical putrefactive products, and jervine, an alkaloid about which there has been much disputation, is described and its reactions given.

An appendix treats very fully of blood, its composition, detection and discrimination, and constitutes one of the most valuable portions of this invaluable work. The author concludes that "the microscope may enable us to determine with great certainty that a blood is *not* that of a certain animal and is *consistent* with the blood of man; but in no instance does it, in itself, enable us to say that the blood is really human or indicate from what particular species of animal it was derived." The author's well-earned reputation as an expert on this subject adds great weight to his deliberate conclusions on such a matter.

The marvellously beautiful steel plates, drawn from nature and executed by the wife of the author, which attracted so much attention in the first edition, reappear in this, with twelve illustrations of microscopic crystals added, and also a steel plate showing the apparent size of the red corpuscles of the blood of six different mammals, the work of his daughter, Mrs. J. Marshall. Nothing of the kind approaching these plates in their fidelity to nature and mechanical perfection has, so far as we know, ever appeared elsewhere. They greatly enhance the usefulness, to say nothing of the elegance, of the work.

In conclusion, we regret that the limits of this review admit only of so imperfect a statement of the strong points and remarkable excellences of Professor Wormley's treatise. The work needs no recommendation to those who have seen the first edition, but to such as may never have examined it we most emphatically and unqualifiedly commend it. It is a model treatise, and no worker in any department of toxicology can afford to dispense with the aid which he will receive from a perusal of its pages. W. G. TUCKER.

COCAINE AND ITS USE IN OPHTHALMIC AND GENERAL SURGERY. By H. Knapp, M.D., Professor of Ophthalmology in the Medical Department, University of the City of New York. New York and London: G. P. Putnam's Sons. Cloth, pp. 87, price 75 cents. For sale by B. Quinn, 498 Broadway, Albany.

Among the many who have, up to this time, written concerning cocaine, the author of the treatise before us is certainly as well qualified as any to discuss the new anæsthetic authoritatively. No important work on ophthalmology, published within the past two decades, has failed to attest the value of Dr. Knapp's labors as a scientific investigator. The spirit of patient and unprejudiced research and the fondness for undistorted facts, which are so characteristic of German scientists, are easily recognizable in the present work. It is a summary of the most noteworthy articles, on this subject, which have hitherto been published, together with the author's personal experience with the drug in question, the whole being presented in a very acceptable manner. The treatise opens with a translation of the original paper which was read by Dr. Koller, the discoverer of cocaine's anæsthetic properties, before the Medical Society of Vienna, last October. Great interest naturally attaches to this paper. The first half of the book, aside from the article just mentioned, is devoted to a general discussion of the subject, in which abundant credit is accorded to all who, in this country and in Europe, have contributed any thing of value to our present knowledge of it. Full recognition is made of the merits and claims of such investigators as Drs. Noyes, Agnew, Bull, Roosa, and others, whose names have, with justice, prominently appeared in connection with this new and important discovery. More than eighty experimenters are quoted. It is worthy of note, in passing, that over four-fifths of these are Americans. Nor do we think that this showing is unfair to our colleagues abroad. Dr. Knapp himself explains the fact by ascribing the preponderance of American contributions to "the enthusiasm, energy and quickness with which the American mind seizes upon any thing that is of practical importance." In further corroboration of the justice of this showing, we may say that, although two bi-monthly issues of the Paris *Archives d'Ophthalmologie* have appeared since the publication of Koller's paper in the *Wiener Medicinische Wochenschrift*, they contain but one short article on cocaine, this being from the prolific pen of Dr. Landolt, who is so justly noted, in the world oculistic, for his promptness to appreciate and acknowledge merit in any meritorious contribution to ophthalmic science, as well as for the many valuable ones for which we are indebted to his own erudition and progressive spirit.

The latter half of the work before us consists of six papers, by prominent New York specialists, on the particular use of cocaine in as many branches of medical science. Its use in ophthalmology and otology is discussed by Dr. Knapp himself. Dr. Bosworth furnishes an exhaustive article on its application to the upper air passages; Dr. Hall, the one on its use in general surgery; its employment in genito-urinary and minor surgery is discussed by Dr. Keyes; and the final paper, on cocaine in its relations to gynecology and obstetrics, is from the pen of Dr. W. M. Polk.

In view of the wide-spread interest which the new anæsthetic has created, the work under consideration, though primarily designed for the medical profession, is not devoid of attraction for the laity. Fabulous reports concerning cocaine, have been widely circulated, and the popular impressions of the drug are, we believe, in great part erroneous. Hence we are pleased to notice that this work is to be purchasable in some of our general bookstores. One prevalent fallacy is that cocaine is a *quasi* universal panacea; another concerns its cost, and would place it, in this regard, on a par with Cleopatra's traditional beverage of dissolved pearls, and consequently beyond the reach of all but bloated bond-holders. Since Dr. Knapp's treatise does not enlighten its readers on this point of popular interest, we may say that the price of a reliable preparation of the chloride of cocaine is about eighty cents a grain; this makes it about twice as expensive as the sulphate of eseria, a drug commonly employed by oculists, and about equally expensive with the hydrobromate of homatropine, which has long been more or less used in ophthalmic practice.

From a purely literary point of view, the present work leaves something to be desired. However, this is not, at least in a comparative sense, adverse criticism, since the same is true of the vast majority of medical works; Mr. Brudenell Carter, of St. George's Hospital, being the only medical author, whom we at present recall, whose purely scientific writings furnish material for the study of good literary style. Dr. Knapp's work is probably all that he intended it to be. It certainly is, as yet, without a successful rival in its peculiar field. We would extend to it a hearty welcome, and wish it the wide circulation and reading which it indisputably merits. C. M. C.

THE OLEATES: THEIR NATURE AND ACTION. By John V. Shoemaker, M.D. Philadelphia, 1885, F. A. Davis, Att'y. 16mo, 124 pages, $1.00.

Hay Fever. By Charles E. Sajous, M.D., Instructor in Rhinology and Laryngology, Jefferson Medical College. 16mo, pp. 103. F. A. Davis, Atty., publisher, Philadelphia.

The author demonstrates that by obliterating the medium between the external irritating cause and the systematic dycrasia, in hay fever, the periodic paroxysms become impossible. This medium lies in three hyperæsthetic areas in the nasal cavities; the obliteration is done by galvano-cautery or by nitric, chromic or glacial acetic acid. Explicit instructions are aided by thirteen engravings.

An octavo volume of about 400 pages, on "Diseases of the Nose and Throat," with 100 chromo-lithographs and sixty woodcuts, by the same author and publisher, is to appear October 1, 1885.

Bacterial Pathology. A series of papers on the exhibits at the Biological Laboratory of the International Health Exhibition, under the charge of Mr. Watson Cheyne. Reprinted from the London *Lancet.* 40 pp., 12mo. Illustrated with over thirty engravings of bacteria and of apparatus. Price, 25 cents. Industrial Publication Co., New York.

Outing is enlarged to nearly double its former size, and its compound title is wisely simplified to the expressive *Outing.* A new and tasteful cover and increased illustration of the best sort and good contents make it alluring. The price of *Outing* is 25 cents a copy, or three dollars a year. It is published by the Wheelman Company, 175 Tremont street, Boston.

Vick's Floral Guide. Rochester, years ago, received the title "The Flour City." After James Vick, the veteran seedsman of America, selected Rochester as his home, the place has become a "flower" city. *Vick's Floral Guide,* with its thousand illustrations, is worth much more than the ten cents asked for it, and that price is deducted from the first order for seeds, plants or flowers.

The Stylographic Pen has been commended in our pages in former years. The improvements by patents of November 18, 1884, lead us now to advise to carry two pocket stylographs—one for red ink. The Dunlap Stylographic Co., 296 Washington street, Boston, will, for a short time only, send their new "Champion Pen," six months' supply of ink, and a gold-mounted pencil, on receipt of the price of the pen alone, which is $2.00 for plain, and $2.50 for gold-mounted.

MEDICAL NEWS.

THE ALUMNI LECTURES.

The Alumni Lectures of 1885, by Professor William H. Thomson, M.D., on "The Germ Theory of Disease," met with warm commendation from the audiences which overflowed Alumni Hall to hear them. They appear in the ALBANY MEDICAL ANNALS for May and also in this year's issue of the proceedings. At a meeting of the Executive Committee, held April 25, 1885, the Alumni Lecture Committee was authorized to make arrangements for a course of lectures for 1886, and have the honor to announce that Professor S. Oakley Vander Poel, M.D., LL.D., of New York city, has consented to deliver the Alumni Lectures at the next meeting, and has named for his subject, "Hygiene; Its Relations to the Profession and the General Public," a topic of universal interest, and a fitting supplement to that discussed last year by Professor Thomson.

Dr. Vander Poel needs no introduction to the Alumni, or to the public. He is widely known as ex-Health Officer of the Port of New York, as an ex-President of the Medical Society of the State of New York, and more recently as President of the Medical Society of the County of New York, and Professor of Public Hygiene in the Medical Department of the University of the City of New York. Dr. Vander Poel has been President of the Medical Society of the County of Albany, and at various times a member of the faculty of the Albany Medical College, being at Present Emeritus Professor of Pathology, Practice and Clinical Medicine. He was graduated from Jefferson Medical College in 1845, and received the honorary degree of Doctor of Medicine from the Albany Medical College in 1849. The majority of the Alumni have the pleasure of personal acquaintance with Dr. Vander Poel, and for many there is the closer tie that exists between student and instructor.

Dr. Vander Poel's lectures will be delivered on Alumni Day, Wednesday, March 3, 1886. The hours and place will be announced hereafter.

A. VAN DER VEER, M.D.,
H. BENDELL, M.D.,
LORENZO HALE, M.D.,
Committee.

MEDICAL ASSOCIATION OF CENTRAL NEW YORK.

The eighteenth annual meeting was held at Syracuse, May 19, 1885.

Present: Dr. J. Van DeWarker (A. M. C., '63), president; Vice-President Dr. J. O. Roe, of Rochester; Treasurer Dr. Alfred Mercer, of Syracuse; Secretary Dr. J. N. Arnold (A. M. C., '62), of Clyde, and forty members. Only six counties out of the fifteen were represented.

After the reading of the minutes of the last meeting, Dr. Van DeWarker delivered the annual address, on "The Progress in Gynecology," and closed with a sketch of the life and character of Dr. J. Marion Sims. The address will be published in the *American Gynecological Journal.*

Dr. Gregory Doyle, of Syracuse, exhibited an apparatus for the after-treatment of club-foot. It consists of a pair of shoes attached to a metallic crossbar, so as to be adjusted to the desired angle. It does away with all straps and bandaging. Dr. Doyle also exhibited his spiral rotator. This apparatus, by a spiral spring, keeps the foot everted continually.

Dr. J. O. Roe, of Rochester, read a paper upon the operation for the removal of tumors from the naso-pharynx, and reported a case in which he had removed a tumor from the right naso-pharynx weighing three and one-half ounces.

Dr. William Manlius Smith, of Syracuse, exhibited an apparatus for determining the amount of urea in a given specimen of urine. It was devised by Dr. Doremus, of New York.

Dr. A. Clifford Mercer, of Syracuse, showed mounted specimens of the comma bacillus under the microscope.

Dr. Barker, of Auburn, gave his method of treating lacerated perineum by intro-vaginal section and internal and external sutures. He claimed the method as original with himself, although it had been claimed by one in New York.

Dr. Herriman reported a case of Cæsarian section. The woman was small, though well formed apparently; but it was found that the sacro-pubic diameter was only three inches. After seventy-two hours' labor the os was dilated only the size of a silver dollar. The forceps were applied without success. Cæsarian section was done, and the child, weighing nearly fourteen pounds, was extracted. Result fatal. Term of gestation, ten months.

Dr. Van DeWarker referred to his case of the midget, which was reported in full in the *Medical News* at the time.

Dr. Sherman, of Lyons, reported a case of embryotomy in a narrow pelvis.

Dr. Weigel, of Rochester, read a paper on the mechanical treatment of Pott's disease, in which he severely criticized the use of the plaster jacket in certain cases, and recommended treatment in the recumbent posture.

Dr. Didama was enthusiastic in his praise of the plaster jacket as he he had seen Sayre apply it at home and abroad.

Dr. Mercer thought the jacket not applicable to cases affecting the cervical region.

The discussion became quite general.

Dr. Roe also reported a case of vascular growth of the nose upon which he had recently operated successfully.

The following officers were elected for the ensuing year: Dr. John O. Roe, Rochester, president; Dr. W. R. Laird, Auburn, first vice-president; Dr. J. L. Jones, Minetto, second vice-president; Dr. Alfred Mercer, Syracuse, treasurer; Dr. J. N. Arnold, Clyde, Secretary; Drs. Roe, Elsner, Arnold, Jones and Kendall, delegates to American Medical Association.

The following committees were appointed: Business, Drs. F. A. Fordyce, Union Springs; W. R. Laird, Auburn; L. A. Wiegel, Rochester. Reception, Drs. D. M. Totman, Syracuse; A. G. Cruttenden, Clifton Springs; C. O. Baker, Auburn. Credentials, Drs. H. E. Babcock, Canastota; W. J. Herriman, Rochester; A. Dann, Rochester.

The following were elected permanent members: Drs. William R. Baird, Auburn; H. H. Coleman, King's Ferry; F. H. Moyer, Moscow; F. B. Dodge, Mt. Morris; Richard M. Moore, Rochester; W. J. Herriman, Rochester; E. O. Hollister, East Bloomfield; H. L. Elsner, Syracuse; John H. Taylor, Holley; W. C. Bailey, Albion; F. J. Sherman, Lyons; L. J. Trowbridge, Palmyra.

The following were made eligible to permanent membership: Drs. C. A. Dewey, Rochester; E. B. Angel, Rochester; V. W. Mason, Canastota; E. E. Barnum, Waterport; F. S. Low, Pulaski; C. M. Lee, Fulton, John H. Jewett, Canandaigua; D. M. Totman, Syracuse; S. M. Higgins, Memphis; A. D. Stewart, Port Byron.

PERSONALS.

—Dr. C. M. Culver ('81), No. 1 South Hawk street, Albany, sends the following:

A self-styled "electrician" has lately published my name, in a circular, claiming to refer to me, by permission, for an endorsement of his methods. I desire to state to my colleagues that the issuer of the circular in question has received no permission from me to use my name as he has done; nobody has had my permission to publish my name in any such connection.

C. M. Culver.

—From the *Albany Evening Times:*

Dr. Henry L. Horton died at Rome, Italy, February 24, 1885. The career of Dr. Horton is one of general interest, as his life exhibits the reward that follows great ability, strict integrity, and an earnest and intelligent devotion to a chosen pursuit. His life is of especial interest to Albanians, as it was in this city that he lived for years, and acquired the elements of his professional education. He was born in Sing Sing, N. Y. His financial resources were limited, and, even after attaining manhood, he for years labored in a mechanical occupation to acquire the means for pursuing his professional studies. Dr. Horton was graduated from the Albany Medical College in 1859, and soon after commenced practice in Morrisania, Westchester county, where he continued to reside. As a student he was diligent, interested and earnest, seeking to thoroughly understand the different branches of medicine. His conscientious and intelligent labors as a student resulted in making him a practical and learned physician, enthusiastic in his profession, following it with a zeal and devotion rarely met with. His fine personal appearance, his pleasing manners, due as much to natural refinement as to a sense of the proprieties of life, made him popular with all. These qualities, combined with his great knowledge and practical skill and with the strict integrity of his private and professional life, caused his practice to rapidly increase; so that in a few years it became burdensome, and he had to secure the services of at first one and afterwards of two or more physicians to assist him. This assistance was necessary to partly relieve him from the burden of his large private practice, and not from the labors incidental to any private or public dispensary or hospital. His practice, while general and with all classes, was largely among the most wealthy and refined families in his vicinity. He early laid the foundations of financial success, and before many years had accumulated a handsome fortune.

Unfortunately his excessive labors gradually undermined his constitution, and last autumn he reluctantly came to the conclusion that his only hope of permanent restoration to health was complete professional rest. He sailed from New York in September of last year, intending to devote at least two years to travel, principally in Great Britain and continental Europe. He journeyed through England, France and Italy, intending in the present year to visit Egypt and Palestine; but in Rome he was taken ill, and in a few days he died.

So lived and died Henry L. Horton. He leaves the memory of an affectionate husband and father, a wise and skillful physician, a true friend and an honest, upright man.

—Dr. William H. Craig (class of 1852) began his duties as postmaster at Albany, March 12, 1877. He was succeeded in office by Dr. Daniel V. O'Leary (class of 1866), June 1, 1885. Both gentlemen are members of the Medical Society of the County of Albany.

—Dr. George A. Bradbury ('83) has moved to Lansingburgh, N. Y.

—Dr. Robert Babcock ('84) is the house physician and surgeon at the Albany Hospital.

—Dr. David J. Fitzgerald ('84), Glens Falls, N. Y.

—Dr. Fred. R. Greene ('84), Petersburg, Rensselaer Co., N.Y.

—Dr. James W. King ('84) is senior assistant physician and surgeon at the Albany Hospital.

—Dr. W. C. Marselius ('84) has moved to Port Jackson, Montgomery Co., N. Y.

—Dr. James Selkirk ('84), a practitioner in Aurora, Ill., was recently married to Miss Terwilliger, of New Scotland, Albany Co., N. Y.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

Annual meeting, second Tuesday in October. Semi-annual meeting, second Tuesday in May. Stated meetings are held Wednesday evenings, at Alumni Hall, Albany Medical College, at least once each month, from October to May.

OFFICERS.—J. D. Featherstonhaugh, president; T. Kirk. Perry, vice-president; Jno. Ben. Stonehouse, secretary; U. B. LaMoure, treasurer.

CENSORS.—William Hailes, Jr., W. J. Nellis, F. L. Classen, T. P. Bailey, Samuel R. Morrow.

STANDING COMMITTEES.—Pathology, William Hailes, Jr., chairman; R. H. Sabin, E. Van Slyke, Maurice J. Lewi, F. L. Classen, J. C. Healey. Hygiene, F. C. Curtis, chairman; A. Van der Veer, D. V. O'Leary, S. B. Ward, W. G. Tucker, E. A. Bartlett, J. E. Hall. Registration, John Thompson, chairman; B. U. Steenberg, J. C. Shiland, C. M. Culver, Secretary Stonehouse, *ex-officio*. Executive, President Featherstonhaugh, Vice-President Perry and Secretary Stonehouse, *ex-officio;* Lorenzo Hale and J. U. Haynes.

Archambeault J. L. 56 Congress, Cohoes, 8-9, 1-3, 7-9
Bailey Theodore P. 95 Eagle, 9-10, 3-4, 7-8
Bailey William H. 1 Washington av. 8-9, 3-4, 8-9
Balch Lewis, 14 Washington av. 8½-9½, 2-3½, 7-8
Ball O. D. 691 Broadway, 8-9, 1-2, 6-7
Barker James F. 661 Broadway, 9-10, 2-3, 6-8
Bartlett E. A. 9 South Hawk, 8-9, 1-3, 6-7
Becker Hiram, New Salem, 8-9, 1-2, 7-9
Beckett Thomas, 276 Washington av. 7-9, 1-3, 6-10
Bell H. W. 382 Broadway, E. Albany, 8-10, 1-2, 6-8

Bendell Herman, office 138 State, 9-4; res. 109 Eagle
Bigelow J. M. 3 Lancaster, 8-9½, 2-3½, 7-8½
Blair L. E. 34 Eagle, 8-10, 2-4, 6-8
Blatner, J. H. 132 Hudson av. 8-9, 2-3, 6-8
Boudrias L. 105 Mohawk, Cohoes, 8-10, 1-3, 7-9
Boulware J. R. 171 Hamilton, c. Eagle, 8-9, 2-3, 7-8
Boyd James P. 212 State, 8½-9½, 1½-3½, 7-8
Brown Edward E. 164½ South Pearl
Brown R. J. 648 Central av.
Case Daniel C. Slingerlands, 8-9, 6-9
Case H. S. 63 Madison av. 8-10, 2-3, 6-8
Clark R. D. 65 Grand, 8-9, 12-2, 6-8
Classen F. L. 66 Grand, 9-10, 1-3, 6-8
Cook D. H. 264 Clinton av. 8-9, 1½-3, 6-8
Craig William H. 12 Ten Broeck, 8-9, 2½-3, 7-8
Craig Joseph D. 12 Ten Broeck, 9-10, 2-3, 7-8
Crawford C. H. 226 Hudson av 8-10, 2-4, 7-8
Cronnse Hiram, Clarkesville, 9 A.M. 4 P.M.
Crounse Jesse, Knowersville, 8-9, 7-9
Culver, C. M. 1 South Hawk, 9-12, 2-4
Curtis F. C. 17 Washington av. 8-9, 2¾-3¾, 7-8
Davidson J. R. South Bethlehem, 8-9, 1-2, 6-7
DeGraff A. Guilderland, 8-9, 1-2, 6-7
Devol C. 48 Franklin, 8-9, 12-2, 8-9
DuBois Mary, 192 Hamilton, 11-2, 7-8
Elmendorf, G. E. Coeymans Hollow
Featherstonhaugh, J. D. 3 Summit, Cohoes, 2-3, 7-8
Fennely P. E. 97 Broadway, West Troy, 10-12, 4-5
Fisk Frank H. 76 Hudson av. 7-9, 1-3, 7-9
Fleischman D. 145 Hudson av. 8-10, 2-3½, 7-8
Fowler Amos 29 Second, 8-9, 1-3, 7-9
Fowler W. H. 387 State, 8-9, 1-3, 6-8
Fredenburgh B. B. Coeymans
Freeman S. H. 77 Columbia, c. Chapel, 8-9, 1-2, 6-7
Graveline L. C. B. 119 Green, 8-9, 1-3, 7-9
Hailes William Jr. 197 Hamilton, before 9, 1-2, 6-7½
Hale Lorenzo, 194 Clinton av. 8-9, 2-3, 6-7
Hall John E. Green Island, till 9½, 1-3, 6-7
Hallenbeck E. C. Bethlehem Centre
Haskell, J. M. Second, Bath, 8-9, 12-2, 7-9
Haynes J. U. 76 Remsen, Cohoes, 8-9, 12-2
Hays William N. 626 Central av. 8-9, 1-3, 7-9
Healey James C. 46 Rensselaer, 8-9, 1-3, 6-8
Helme Thomas, McKownville, 8-10, 7-8
Huested Alfred B 77 Eagle, c. Hudson av.
Hun Henry, 33 Elk, 8-9½, 2-3, 7-8
Hun Thomas 33 Elk
Keegan P. J. 139 North Pearl, 8-9, 12-2, 6-8
Kilbourne Albert W. 792 Broadway, 8-9, 2-3, 7-9
La Moure U. B. 90 Hudson av. 8-9, 2-3, 7-9
Lewi Joseph, 94 Westerlo, 8-9, 2-3, 6-9
Lewi Maurice J 54 Eagle, c. Lancaster, 8½-9½, 1½-3, 6½-8½
Lyon George E. 494 Croton, West Troy, 8-10, 5-7
March Henry, 221 State, 9-10, 2-3, 6-8
McAllister John D. Rose, n. Madison av. 8-9, 12-3, 6-8
McNaughton Henry G. 3 South Hawk, 7-11, 6-7
Mereness H. E. 712 Broadway, 1-3, 6-8
Merrill C. S. 23 Washington av. 12-4, 6-7
Merrington Frank J. 236 Clinton av. 9-10, 2-3, 7-8
Miller Howard, 85 Jefferson, 9-10, 2-3, 7-8
Mitchell J. H. Cohoes
Monroe Nelson, Swan, c. George, Green Island, 7-9, 1-3, 7-8
Moore J. W. 92 & 94 Mohawk, Cohoes, 8-9, 1-3, 7-9
Morrill F. D. 90 Madison av. 7-9½, 1-3½, 6-8
Morrow Samuel R. 29 South Hawk, 8-9, 2-3, 6-8
Mosher C. D. 351 South Pearl, 2-4 P. M.
Mosher Frank G. Coeymans, 8-10, 7-8
Munson George S. 138 State, 9-4
Murphy P. M. 66 Jay
Murray William H. 269 Lark, 8-9, 1-3, 6-7½
Nellis T. W. 44 Eagle, 8½-10, 1-3, 6-8
Nellis. W. J. 44 Eagle, 8½-10, 1-3, 6-8
Newcomb. G. H. 94 Chestnut, 9-10, 1-2, 6-8
O'Leary, D. V. 69 South Ferry, 8-9, 1-3, 7-9
Paine H. S. 105 State, 8-9, 1-3, 7-8
Papen G. W. 89 Schuyler, 8-9, 2-3, 8-9
Peltier G. Upton, Cohoes, till 9, 12-2, 5-8
Perry T. Kirk, 174 Second, 8½-9½, 2-3, 6-8
Peters Samuel, 21 Seneca, Cohoes, 8-9, 1-2, 6-8
Porter Charles H. 55 Eagle, 8-9, 2-3, 7-8
Purple W. L. 46 Second, 9-10, 12-2, 6-8
Reynolds W. H. T. 72 South Hawk, 8-9, 1-3, 7-8
Riley Joseph W. 689 Broadway, 8-9, 2-3, 7-8
Ritzman Otto, 66 Willett, 8-9, 1-3, 6-8
Russell Selwyn A. 135 North Pearl, 10-11, 3-4, 6-7
Rouchel Laurentine, 101 Clinton av. 10-12, 2-4, 7-8
Sabin R. H. 245 Broadway, West Troy, 7-8½, 12-2, 6-7
Sabin William B. West Troy, 7-8½, 1-2, 6-7
Scattergood C. F. 10 Bleecker place.
Schutter Wm. L. 28 N. Knox, 8-9, 2-3, 6-8
Seger C. E Callanan's Corners, 8-9, 1-2, 6-7
Shanks Seth G. 547 Clinton av. 8-10, 1-3, 7-8
Shiland A. 251 Broadway, West Troy, 8-9, 2-3, 7-8
Shiland J. C. 251 Broadway, West Troy, 8-9, 2-3, 6-8
Skillicorn J. H. 324 Hudson av. 8-9, 1-3, 6-7½
Smith Charles H. 246 Washington av. 8-10, 1-3, 5-7
Snow N. L. 28 Eagle c. State, 8 9, 2-3, 7-8; res. 243 State, c. Swan
Starkweather R. H. 200 Central av. 8-9, 2-3, 7
Steenberg B. U. No. 1 Ten Broeck 8-9, 2-3, 6½-8
Steenberg, H. W. 24 George, Green Island, 7-9, 1-3, 6-8
Stillman, W. O. 86 South Swan, 8-9½, 1-2½, 6-7½
Stonehouse Jno. Ben. 5 High 9-10, 1-3, 6 8
Swinburne John, 57 Eagle, 9-10, 2-4
Ten Eyck A. P. Defreestville, Rens. Co. 7-9, 1-3, 6-8
Thompson John, 5 Canal, 8-9½, 1-1½, 6-8
Townsend Franklin Jr. 188 State, 9½-10½, 2½-3½, 8-9
Trego T. M. 5 Ten Broeck, 8½-9½, 2½-3½, 7-9
Tucker Willis G. College Building, 2-6 P.M.
Ullman G. L. 70 Central av. 8-9, 2 3, 6-7
Van Allen, T. F. C. 47 Eagle, 9-10, 1-4
Van der Veer Albert, 28 Eagle, 8-9, 2-3, 6-8
Van Slyke E. 320 South Pearl, 8-9, 2-3, 6½-8
Van Vranken A. T. 31 Union, West Troy, 8-10, 1-3, 6-8
Wade E. M. Watervliet Centre, 7-9, 3-5, 7-9
Ward S. B. 135 North Pearl, 9-10, 2-3, 6-7
Weidman Felix, Westerlo, 6-10, 6-9
Winne L. B. 72 Livingston av. 8-10, 1½-3, 6-8
Witbeck C. E. 20 Seneca, Cohoes, 8 9, 1-3, 7-9
Woodward Harriet A. 6 Kenmore place, 8-9, 2 5, 6-7

ALBANY
MEDICAL ANNALS:
A Journal of the Medical Society of the County of Albany.

VOL. VI. JULY, 1885. NO. 7.

ANTISEPTIC MIDWIFERY.

BY LOUIS E. BLAIR, M.D., ALBANY.
Albany Medical College, 1881.

[FOR ALBANY MEDICAL ANNALS.]

Antiseptic midwifery has not attracted the attention in America, as yet, that it deserves. Antiseptic surgery is an established fact, and all the teachers of the science teach it as the essential condition of successful practice. To be neglectful of it would presuppose gross ignorance or carelessness. But for antisepsis in midwifery the latest works have nothing to say, while the average physician has not been apprised of its importance, nor had an opportunity to see it put into practice. In Europe it is to-day the central figure in obstetric teaching and the mainstay of obstetric practice.

Having had an opportunity of attending the lectures and visiting the wards at Prague, Leipzig, Wurzburg and Vienna during the past winter, and witnessing the great care everywhere exercised to keep the patient in a clean condition and to have the attending physician observe certain rules, it may be well to learn something of what our professional brethren there are endeavoring to put into practice, and to know what they are trying to avoid; in other words, what is deemed essential to conduct a birth, as a surgical operation, in an antiseptic manner.

The student is taught to approach an obstetrical case with the same careful regard for cleanliness and its synonym, antisepsis, as he would a surgical one. It is not expected that he would engage in midwifery if he had busied himself with infectious occupations, no more than he would attempt a capital surgical operation with dirty hands, nasty sponges or unclean instruments. Nastiness, as the Germans call it, is the enemy they are fighting; and, be it real or imaginary, we cannot dispute the remarkable change in their statistics and the great falling off in the death rate since the antiseptic method has been followed. And not only is the decrease in mortality apparent, but also the absence of the many puerperal febrile conditions which formerly prevailed. In the lecture-room the student is forever cautioned about the importance of antisepsis in midwifery, while on the wards he sees nothing but washing and scrubbing of the hands and arms of assistants and nurses.

On the clinic at Prague the printed rules and regulations for disinfection must be faithfully observed, and it would be regarded as a serious violation if they were not. The foreign student is not allowed to practice in the wards until the assistant is satisfied that he understands the method of disinfection, and, moreover, will carry them out. It has been ascertained for a fact that physicians strange to the new method do not observe the greatest care, because they are not impressed with its importance, while those who are already expert never lose sight of the principle established nor grow tired in observing it.

At Leipzig, Dr. Hoffman, the assistant to Credé, said that in vacation time the febrile disturbances which occurred among the patients after confinement were almost imperceptible, because the chances for infection were greatly lessened by the students being absent from the wards, and the vaginal examinations were only made by the midwives, who are not occupied with any other duties. In proof of this he showed a large number of temperature charts to illustrate the cases which occurred in term time and out, and the difference was at once apparent, the elevation of temperature being directly traceable to the numerous examinations of the students, there being some who were not as particular or careful in cleansing their hands and arms as others.

It is not a difficult matter to carry out antiseptic obstetrics in private practice, and the carefulness and cleanliness, which at first seem somewhat unnecessary and superfluous, will shortly be looked upon as absolutely necessary. I can well recall the words of the distinguished Prof. Breisky in one of his lectures: "If you learn to know and to appreciate the fact that the cause of unfortunate obstetrical practice is directly chargeable to dirt and nastiness, and that the brilliant successes of the new era are the outcome of cleanliness, you have already learned the secret to successful practice." The chief purpose and object constantly kept in view is to have utensils clean, instruments clean, the patient clean, and the hands of the physician likewise clean and free from septic matter. Obscure febrile disturbances, the so-called milk fevers and the reactionary fevers have all vanished, as foggy as they were in their etiology previous to the illumination of rational treatment.

The methods in the lying-in hospital at Prague may be taken as a type of antiseptic obstetrics. The rules observed are substantially as follows: For the patient, a bath is given as soon as she is received on the ward, the vagina is thoroughly washed and disinfected with a five per cent. carbolic solution or of sublimate 1.3000. The patient is also furnished with a clean night-dress. For the attending physician or student it is enjoined that on the day he is busied with pathological or anatomical studies he should not present himself at the hospital. He is required to disinfect his hands and arms most carefully by scrubbing with warm sublimate water and soap, the sleeves being rolled up above the elbows. The corrosive sublimate and water is usually 1.2000. After having examined one patient, and before proceeding to examine a second one, the same care in washing the hands and arms must be observed.

It is forbidden to support the perineum by introducing one or two fingers into the rectum, as taught by Goodell (who recommended hooking two fingers into the anus and drawing the perineum forward during a pain, to remove the strain from the thinned border of the vulva, and also to stretch the perineum), as by so doing the fingers are rendered septic again. If the labor has been normal, there are no further washings or douches of the vagina made during convalescence, the external genitals being occasionally washed to cleanse the parts from the lochial discharges. Formerly the vagina was irrigated with a disinfecting solution daily, and the success was not so good as now where nothing is done.

The temperature is taken twice a day. If there is any marked elevation of temperature, the cause is sought for in the vagina or uterus, just on the same grounds as a surgeon would remove the dressings to seek for a cause of fear at the seat of operation. If there have been any extensive lacerations of the soft parts, they are carefully sewed and properly disinfected, the stitches remaining usually for five or six days before they are removed. The management of the placental stage is regarded now as the most important part of the parturient period, for it is here where most frequently the patient is infected. The hand should never be introduced into the vagina or uterus for the purpose of hastening the expulsion of the placenta, unless some alarming condition, as hemorrhage, should demand it. By undue traction the membranes may be detached, and the hand of the physician may carry septic matter to the bleeding surfaces of the uterus and vagina, and so directly injure his patient. It is wiser to wait hours for the spontaneous delivery of the placenta than to release it mechanically with the fingers, as is taught in the text-books.

In the placental stage there are three things to be accomplished, namely, to guard against hemorrhage, to see that the uterus contracts and that the placenta is properly expelled. If the uterus contracts well there is but little danger from hemorrhage. The weight of the hand on the fundus, and sometimes gentle friction, are sufficient, as a rule, to stimulate uterine contractions. Credé's method of expression has simplified to a great degree, and has also hastened, the delivery of the placenta. It is important to follow the directions of Credé, who advises to wait for four or five pains and with the pain to apply the expelling force. If great force is used in the absence of pain, the uterus becomes unduly stimulated to contract, and as a result the membranes are torn off, which, remaining behind, may form a focus for septic matter. For this reason Breisky claims that Credé's method is a frequent cause of detached membranes, and afterward infection, and advises that the practitioner lay the flat hand on the lax walls of the abdomen and grasp the fundus lightly.

It is always important to examine the after-birth, in order to see if it is entire, or whether portions have remained behind. If it is not complete, it is well to make a note of the fact, so that if there be any decided elevation of temperature in convalescence suitable irrigations can be made to disinfect the parts which may have accidentally remained behind and become the source of the disturbance. But, above all things, it is deemed very unwise to introduce the hand into the uterus to release the placenta, and it should never be done unless some urgent emergency demands it. It is far better to wait hours for the spontaneous delivery of the placenta. Where it has been found necessary to introduce the hand, as in turning or other operations, the uterus is thoroughly irrigated with sublimate (1.3000) and pencils of iodoform and gelatine are left in the uterus, and the vagina is afterwards thoroughly washed.

A marvelous exhibit is the result of this great care. At Prague the mortality last year, including all the complications and operations at birth, was but three per thousand, while at Leipzig and Vienna it was only a little higher. It may be that a very large part of the care taken is superfluous, but it is a difficult matter to say what should be omitted; and, so long as the present success dates from the moment that the antiseptic method was introduced, it is worth the while to be persistent in all the details until something better is demonstrated. Every principle in practice which tends to lessen mortality is worthy of acceptance, and every detail contributing to this end is important enough to follow.

I was interested in a conversation I had with Prof. Credé at Leipzig, who spoke enthusiastically for antiseptic obstetrics, and contrasted the old methods with the new. He said as he looked back over the years in which he practiced midwifery that he could clearly see now the many cases of puerperal fever for which he had been entirely to blame. While obstetric assistant at Vienna he was at the same time studying pathological anatomy with Rokitansky, and it was a daily occurrence with him to conduct two or three post-mortems and then go directly into the lying-in wards and attend the confinements as they would present themselves. He said that it was found necessary to set apart a ward for the puerperal cases, which were occurring so frequently. The death rate was very large, a recovery being an exception. The number of deaths per week corresponded very nearly with the number of new cases. This was conclusive enough to show what was possible where the septic matter was carried directly by the practitioner in discharging his daily work.

It is true that we are not making the number of post-mortems as mentioned, but we are seeing cases of erysipelas, of acute infectious diseases, as surgeons we are handling septic matters, and so are very apt to spread the germs of disease instead of healing the sick. A proper observance of the errors as they have been pointed out, and a just appreciation of the value of cleanliness, must make a material change in the cases which shall come under our observation in the future. From now on, no conscientious practitioner would presume to attend a woman in labor before he felt satisfied that his hands had been freed from the poisons which he carries about with him. He would feel that unless he had carefully heeded the principles of disinfection he had not acted fairly towards his patient. Students in Germany and Austria are carefully trained in these methods; seeing them constantly before their eyes, they follow them almost instinctively as practitioners.

Antisepsis can be pursued very well in private practice, and in going to a case it would be advisable to have a small hand satchel in which could be placed a fountain syringe with a glass nozzle, glass being easily cleaned and likewise inexpensive; a vial containing a solution of corrosive sublimate, so that a dilution of 1.3000 could be made; a little iodoform to have as a disinfectant if it is necessary to sew up any laceration; and, besides, a nail brush to cleanse the hands thoroughly. This is all that is required, and can always be kept together, that is, within easy reach.

As regards the use of ergot, it may be interesting to know that on the clinic at Prague its use has been entirely discontinued, not one drop having been given in the past year, and the results are just as good, no after-bleeding occurring.

Antiseptic midwifery has a future that is very promising. The satisfaction of seeing a patient making a rapid convalescence, with almost entire freedom from febrile disturbances, will be ample reward for the little extra care which it will entail. The puerperal fevers will disappear in proportion as cleanliness and antisepsis have been carried out. Instead of combating an elevated temperature with quinine and antipyretics generally, the cause will be sought for rationally, and, the uterus and vagina being thoroughly irrigated and disinfected, the reduction in temperature will tell soon that the disturbing element has been eliminated.

ABSTRACTA.

Alcoholic Paralysis.—The immediate and transient effects of an excessive quantity of alcohol upon the human nervous system, whether they are manifested in the form of drunkenness, or of delirium tremens, or of an acute attack of insanity, are well known. Scarcely less evident are the effects produced upon the nervous system by a less excessive, but a more prolonged, abuse of alcoholic drinks. These effects may be manifested either in a general failure of physical and mental power, or in a form of disease closely resembling progressive paralytic dementia, or in various forms of chronic insanity, or in epilepsy, or in neuralgia, or in paralysis. In the acute form of alcoholic poisoning, no change in the structure of the nervous system has been found, except that the meninges in common with the internal organs and the mucous membranes are the seat of a very decided injection and slight exudation. In the chronic form of alcoholism, a number of pathological changes have been discovered in the nervous system, which, however, vary greatly in different cases.

Of late years the paralysis which results from the abuse of alcohol has been accurately described by numerous observers, and the attempt has been made to discover the lesion of the nervous system which is associated with this form of paralysis. Two cases which are reported by Dr. Henry Hun, of Albany, in the *American Journal of Medical Sciences* for April, 1885, are typical examples of this disease, and contribute to a better understanding of it.

Dr. Hun has collected the recorded cases of alcoholic paralysis, and from their study he holds that we are justified in regarding it as a special form of disease with the following symptoms: After a number of cerebral and gastric disturbances due to the alcoholic poisoning, the symptoms of the disease proper commence with neuralgic pains and paræsthesiæ in the legs, which gradually extend to the upper extremities, and which are accompanied at first by hyperæsthesia, later by anæsthesia, and in very severe cases by retardation of conduction of pain. Along with these symptoms appears a muscular weakness, which steadily increases to an extreme degree of paralysis, and is accompanied by rapid atrophy and by great sensitiveness of the muscles to pressure and passive motion. Both the sensory and motor disturbances are symmetrically distributed, and the paralysis attacks especially the extensor muscles. In addition to these motor and sensory symptoms, there is also a decided degree of ataxia. The tendon reflexes are abolished, and vaso-motor symptoms, such as œdema, congestion, etc., are ususlly present. Symptoms of mental disturbance are always present in the form of loss of memory and in transient delirium.

The lesion is in all probability a degeneration of the peripheral nerve fibres and of the nerve cells in the cerebral cortex, together with a chronic congestion or inflammation of the pia mater. This lesion explains well the symptoms, although it is curious that alcohol should not attack the spinal cord, but only the highest and lowest part of the nervous system, if one may so call the cortex of the brain and the terminal branches of the peripheral nerves.—*Detroit Lancet.*

PSEUDO-TABES CAUSED BY SULPHIDE OF CARBON.—Berbes, in a communication to the Clinical Society of Paris (*La France Medicale*), reports the case of a laborer handling large quantities of sulphide of carbon, who presented symptoms of cerebral congestion, motor trouble and hyperæsthesia of the skin, with finally ensuing complete paraplegia, lasting two months. The powers of coördination became almost entirely absent, while the perversion of sensibility reached a remarkable degree, and the sexual apparatus wholly lost its functional activity. Besides, darting pains in almost all regions of the body, but chiefly in the cardiac zone, where mitral insufficiency was found, were constantly present. It was obviously a case of tabes produced by intoxication with the sulphide of carbon, the patient improving within a couple of months under the influence of purgation and nervous stimulation.—*Therapeutic Gazette.*

CARBUNCLE.—One or two minims of a ten per cent. ointment of oleate of morphia, applied once in three hours, shrinks the tumor and gives marvelous relief.—*James F. Hibbard, M.D., in Indiana Medical Journal.*

POLIOMYELITIS ANTERIOR CAUSED BY ARSENICAL POISONING. —Dr. W. Page McIntosh reports two cases of acute poliomyelitis anterior in the adult, in which the only assignable cause of the disease was acute arsenical poisoning. Other symptoms characteristic of arsenic were present in both instances.—*Med. Record.*

CORPULENCE.—Ebstein (*Birmingham Medical Review*) disputes the view that fat makes fat; fatty food protects the albumin and prevents its forming fat. His treatment consists in moderating the quantity of food, and, while cutting off all vegetable carbo-hydrates, sugar, starch, etc., allowing a moderate quantity of fat — two or three ounces daily — to be taken. He also suggests that the diet should be monotonous, greasy and succulent, so as to cause satiety rapidly. He disallows beer, but permits light wines. The following is the diet used successfully by Ebstein in one of his cases:

Breakfast.—One large cup of black tea—about half a pint—without sugar; two ounces of white or brown bread, toasted, with plenty of butter.

Dinner.—Soup, often with marrow; from four to six and one-half ounces of roast or boiled meat, vegetables in moderation, leguminous preferably, and cabbages. Turnips were almost, and potatoes altogether, excluded. After dinner, a little fresh fruit. For second course, a salad or stewed fruit without sugar. Two or three glasses of light wine, and immediately after dinner a large cup of tea, without milk or sugar.

Supper.—A large cup of black tea, as before; an egg, a little fat roast meat, or both, or some ham with its fat, bologna sausage, bread, well buttered, occasionally a small quantity of cheese, and some fresh fruit.

On this diet the patient lost twenty pounds in six months.

Ebstein insists on the necessity of always keeping to a restricted diet if the tendency to corpulence is to be successfully combated.—*Detroit Lancet.*

NAPHTHALIN IN HAY FEVER.—Dr. E. Lippincott, Memphis, Tenn., cures hay fever by one-tenth grain doses of Naphthalin every four hours. Time required is not longer than a week, unless the disease has existed a long time, when other remedies are required, as Ars. iod., Grind. rob., etc.—*United States Medical Investigator.*

NERVOUS SHOCK AS A CAUSE OF PERNICIOUS ANÆMIA.—Dr. Roland G. Curtin reports three cases of pernicious anæmia which followed directly on severe mental emotion of a depressing character. Cases having a similar origin have been reported by Mackenzie and by the staff of St. Bartholomew's Hospital.—*The Polyclinic.*

Cleanliness in Labor Cases.—In the lying-in department of the Vienna Algemeine Krankenhaus some 10,000 deliveries occur annually. * * In Prof. Carl Braun's ward before examining a case, or attempting delivery, the hands must

1. Be washed with soap and water, and well scrubbed with a stiff brush, especially the finger nails.

2. They must be dipped into a five (5) per cent. solution of permanganate of potassa, and

3. Passed through the same process with a solution of two to five per cent. of oxalic acid, which decolorizes the permanganate stain on the hands.

4. And, finally, the hands are washed in a solution of carbolic acid, of a five per cent. strength, and are then ready for the vaseline and an examination.

As soon as the after-birth has been delivered, the vagina is washed out, high up, with a two per cent. solution of carbolic acid at the temperature of the room. About one gallon of the solution is used, and the injection is given by means of a huge glass fountain syringe. Almost as soon as the child is born, and often before the cord is cut, its eyes are syringed out with a two per cent. solution of the nitrate of silver.

A more thorough antisepsis can hardly be conceived of, and the results seem to justify the trouble, though I cannot at this moment lay my hands on the statistics of the hospital.—*W. O. Stillman, M.D. (A. M. C.,* '78), 86 *South Swan street, Albany, in Med. and Surg. Reporter, Phila., March* 28, 1885.

Digestylin, from the laboratory of W. F. Kidder & Co., 83 John street, New York, is offered to the medical profession as a palatable and potent remedy for acute and chronic gastro-intestinal disorders, including vomiting of pregnancy and cholera infantum. A sample will be sent to any physician who will pay carriage. Formula: Each dose of two teaspoonfuls contains of pepsin gr. x, of pancreatin gr. v, of ptyalin gr. iij, of choleate of soda gr. $\frac{1}{4}$.

Gout.—Nitrite of Amyl inhalation increases excretion of uric acid in the urine. Archibald D. McDonald, M.D., Liverpool (*Brit. Med. Jour.*, May 23), was led, by noticing this fact, to use nitrite of amyl in gout, with remarkably good results.

Gonorrhœa in the Female (Martineau, in Paris Obstetrical and Gynecological Society) has acid pus, while pus of leucorrhœa is alkaline.—*Medical Age.*

A Governor's Views of What a State Board of Health Should Be.—I regard the state board of health as one of the most important and necessary of our state organizations. It should be heartily supported, and made as efficient as possible. Science has demonstrated that many of the diseases which are attributed by superstition and ignorance to supernatural influences are the results of natural causes, and may be avoided. The legislature, therefore, did a wise thing when it established a board to investigate the sanitary condition of our state, and to educate the people to a knowledge and observance of the laws of health. We needed to be told that physical evils are not always unavoidable dispensations of Providence, but are the results of causes which we often produce, and which we may generally prevent. We needed to be taught that the worst enemies of human health are generated in the filth that festers about many of our dwellings, throwing off poisonous miasms, and loading the air we breathe and impregnating the water we drink with the germs of disease and death; and we needed to be instructed how to preserve our health and prolong our lives by an earnest and unceasing warfare upon sickness-breeding impurities of all kinds. The primary object in establishing the board of health was undoubtedly to impart such information and instruction. In this the board has been actively engaged, and appears to have made good progress. But danger may come from abroad, and additional duties may devolve upon it. It is well known that Asiatic cholera has prevailed in many parts of Europe during the last year, and it is feared it may reach this country the present season. In case of its approach, the board should be charged with the duty of enforcing the most stringent sanitary regulations. If any additional legislation is necessary to enable it to do this promptly and effectually, it should be had at this session. The regular expenses of the board are fixed by statute, and I think will be sufficient for the ordinary wants of the year; but should it become necessary to resort to extreme measures, a further sum might be needed, and I suggest that a reasonable amount be placed in the hands of the governor and council, to be used if found necessary.—*From Message of His Excellency Moody Currier, Governor of New Hampshire, June,* 1885.

Iodism is said to be prevented by bromide of potassium.

Milk; Its Medical Bearings.—Extracts from report of R. D. Clark, M.D., Chemist, Albany, to Hon. J. K. Brown, State Dairy Commissioner: It is stated in the Third Annual Report of the New York State Board of Health that it is believed two-thirds of all the infants and children in the state depend upon milk as it is daily purchased at the door or in the market places. In the Fourth Annual Report, Edward W. Martin and Charles E. Munsell, state inspectors of milk, say that "three-quarters of our infant population in cities are brought up on cows' milk."

The purity of milk is affected in various ways, viz., by adulteration, by the sanitary conditions and feed of the cows, etc.

In reference to adulteration, many foreign substances have been added to milk, but by far the most common forms of adulteration are the taking off of fat and the addition of water. The taking off of fat from milk that is to be given to an infant as its only supply of nutriment is of greater moment than is generally known. * * Furthermore it is believed that nature has especially adapted butter fat to the digestion of the infant; for fats are mostly digested by the fluid secreted by the pancreas, an organ supposed to be poorly developed in the infant, but owing to a large amount of free fatty acids in butter fat it can be assimilated without this fluid.* Thus we see that milk fat is one of the most, if not the most, important ingredient of an infant's food. * *

In the Second Annual Report of the State Board of Health, 1881 and 1882, it is stated (the facts were taken from the report of C. F. Chandler, Ph.D., and C. E. Munsell, Ph.B., to whom it was given to investigate the adulteration of milk) that "while a large proportion of milk sold has been but moderately watered and skimmed, and is still above the standard of the poorest milk (for which they allowed only 2.5 per cent. of fat), much of the milk has been *extended* and skimmed far below this standard. So openly are these frauds practiced that 'creameries' have been established in many localities, the names and localities of seventy-three such establishments being known to the writers, of which sixty-three are known to send milk to New York city, all of which is sold as whole (pure) milk on its arrival."

The writer has analyzed milk sold in this city and found that over 50 per cent. of the fat had been taken off, and has strong reasons for believing that over 90 per cent. of the milk sold in

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* Routh on Infant Feeding (3d ed.), p. 131.

Albany, before the dairy department was created, was skimmed and watered.

As the solid constituents of cows' milk, except sugar, are in greater proportion to the water than in human milk, it is found necessary to dilute it more or less with water for young infants. The amount of dilution required is determined by actual experience with each individual case; and, generally, there is a strength found on which that particular infant will thrive, and when deviated from, trouble will soon arise.

Now, when water is added in unknown and fluctuating quantities, it is impossible for lay people to find or keep that strength.

The greatest danger, however, from the adulteration of milk with water lies in its capability of carrying the germs of disease into the system, and this has an especial importance in the case of children, as they are peculiarly susceptible to such poisons, owing to their weak digestive powers.

The latter fact has received special importance during the present epidemic of cholera in the east, in the fact that Dr. Koch, of Berlin, found that those possessing weak digestive powers were the surest to be attacked by this dread disease.

The frequency of the development of miliary consumption in the bowels of children has long been noticed by the profession.

That milk does sometimes carry disease germs into the human system is beyond question. The events told by Routh, in his work entitled "On Infant Feeding," are alone sufficient to demonstrate this sad truth. * *

As conclusive evidence is found nearer home, in the report of Dr. F. C. Curtis, of Albany, on his investigation of an epidemic of typhoid fever in Port Jervis, this state, where he traced directly 126 out of 148 cases (which last number constituted the epidemic) to the milk supplied by one "milkman," who obtained it from a farm house wherein had occurred three cases of the fever just previous to and at the time of the outbreak. The milk was probably infected through the water and cloths used to wash out the cans.

The spread of other zymotic diseases, as scarlet fever, diphtheria, etc., has been traced to foul water in milk.

That the *food* given to milch cows may be such as to modify their milk deleteriously seems to be irrefutable.

The natural food of a cow is grass, either green or dried, and when she is fed exclusively upon it, her fresh milk is generally alkaline in reaction; and, on the contrary, the milk of cows fed either wholly or in great part upon food other than the natural is almost invariably acid.

"Dr. Mayer does not believe that this acidity is due to want of exercise so much as to the unscientific manner in which the cows are fed. * *

"He considers the potato mash the cause of the acidity. The milk of the cows of gardeners and cow feeders is usually praised by the Berlin women as being particularly good. But Dr. Mayer has observed that it often gives rise to diarrhœa and cutaneous eruptions in children, which, he supposes, is due to the cows being fed with the cabbage, turnip and potato refuse. The very worst milk is that supplied by cows fed on potato refuse from brandy distilleries; the best among the stall-fed being that obtained from the cows of cow fatteners, which feed on hay and grass in stalls. By substituting the milk of the latter for the former, he was often enabled to arrest at once the intestinal derangements previously refered to."

All physicians know how intolerant infants are of acid milk, and nursing mothers generally have a strong prejudice against eating acid food.

Dr. Lewis Smith, of New York, in his work on the "Diseases of Infancy and Childhood," says: "Milk used for infants should always be alkaline. If it is acid, as shown by the proper test, it should be rejected."

A striking illustration of the evil effects of the milk of slop-fed cows on children was afforded Dr. C. S. Merrill, of this city, in the case of his own two-year-old child. The facts are briefly these: While traveling in Germany with his family in the summer of 1884, they stopped at a hotel in Neuhausen. The day after their arrival at this hotel his child, who was previously well, was taken with a diarrhœa. The doctor, after having been assured by the landlord that the milk supply was from his own cows, kept at grass upon the premises, restricted the child's diet to milk alone; but, finding him growing rapidly worse, made a private investigation of the source of the milk supply, and found the cattle confined in a barn, and learned from the cow-feeder that they got nothing save the refuse matter from the table of the hotel — mostly stale fruit. He immediately left that hotel, and his child speedily recovered, notwithstanding he continued with a milk diet. That the sickness was due to the milk of these slop-fed cows there can be but little doubt, as the other sanitary conditions were good. The hotel stood on high ground and some distance from any other building.

The well-known effects of drugs given to the mother, upon the child; the peculiar odor of milk from cows fed upon turnips, cabbage, onions, etc.; the change of taste of the milk by feeding the cow wormwood, decayed leaves and other bitter substances; the change of color produced by feeding saffron, rhubarb, madder, etc.; the poisoning produced by milk from cows having eaten poisonous plants, though harmless to themselves, all go to show that the milk of a cow is quickly influenced by what she eats, and that it is deleteriously affected (as food for infants at least) when the natural food is wholly or in great part substituted by artificial, especially if the "artificial" be in an advanced state of fermentation or putrefaction. But how much artificial, in a good healthy condition, may be given with the natural is a question yet to be ascertained by experiment.

If unnatural food will impart pernicious properties to milk, it would seem that unnatural surroundings would produce still more injurious effects. And observation strongly supports this supposition. It is frequently seen that the milk of mothers suffering from emotional disturbances, as hysteria, anger, fright, etc., will produce convulsions and other violent symptoms in the child. It is also known that fatigue of the mother has vitiated her milk. Though a cow greatly differs, mentally, from a human being, no one who has ever seen her appearance and actions when her calf has been ruthlessly taken from her will doubt that she is susceptible of deep emotion. Cases are on record showing that the milk of cows driven too great a distance has produced severe sickness in children.

In the light of analogy we see that cows are affected pretty much the same way by the same influences as mankind, and with this view their treatment is an important factor. Depression of spirits in man is known to be a fruitful source of indigestion, and one of the marked phenomena of digestive derangement is a change in the character of the secretions (or excretions). Many cow owners are aware of this fact and treat their cattle with great kindness, some as a matter of conscience and others as a matter of economy.

The danger attending the use of milk from diseased cows will be seen from the following demonstrated facts: Apthous fever, or foot and mouth disease, is a highly infectious febrile disease of cattle characterized by a vesicular eruption upon the feet, mouth and udder, and their milk has been shown by experiment to convey the disease to man.

Dr. Billings, in his book entitled "Relation of Animal Diseases to the Public Health," says upon this subject: "Dr. Hertwig (of the Veterinary Institute, Berlin, Prussia) first proved the same by direct experiment. He drank daily, for four consecutive days, a quart of milk taken from cows having the disease. On the second day he observed a mild fever, pains in the limbs, headache, a dry and hot throat, and a peculiar sensation in the hands and fingers. These mild phenomena continued about five days; then the lining of the mouth became swollen, especially the covering of the tongue. In a short time small vesicles began to develop. At the same time that these symptoms appeared in the mouth and on the lips there appeared an eruption of similar character upon the hands and fingers. Two medical practitioners also subjected themselves to the same experiment, and at the same time similar results followed."

Inflammatory diseases of the udder, even in a mild form, produce perceptible changes in the milk, one of which is a condition resembling the milk shortly after calving, known as colostrum or "beastings," and which acts as a laxative, when taken in small quantities, upon children; and doubtless when taken in large quantities or continued small quantities would produce severe intestinal irritation.

Blyth says of milk taken from a heifer suffering from inflammation of a portion of her udder, "The milk was pink in color, and contained about a twentieth of its bulk in blood; it was perfectly fresh when examined, but rapidly putrefied."

The same author also says of a sample of milk drawn from an udder diseased with consumption (after giving its chemical analysis): "The whole quantity of the fluid did not exceed 70 c. c. (about two and one-fourth fluid ounces). It was of dirty amber color, with the casein partially separating.

"A microscopical examination showed very few fat globules, and the following abnormal elements:

"1. Clusters of oval or round granular cells, for the most part .0005 inch in diameter, with a well-marked oval nucleus.

"2. Granular masses, irregular in shape, varying in size from about 0.0006 of an inch to ten or twelve times that size.

3. "Granular rounded bodies, stained brilliantly by magenta or carmine.

"This, then, is phthisical (consumptive) milk in its most intense form, and one never likely to be found in commerce, but admixture of such a fluid with genuine milk is possible."

The milk of a cow suffering from typhus also shows marked changes — a deficiency of all the solid ingredients, except the salts, an increase of the watery element and salts, and sometimes the presence of blood and matter.

We had an occasion within a few weeks of observing the appearances of milk from a woman suffering from a mammary abscess. The gross appearances were marked. The milk was thick and viscid, of a bluish-yellow color, very much resembling the pus from the abscess, though the microscope did not reveal any pus corpuscles or other abnormal elements.

Dr. Percy, of New York, gave some drawings (in the report of the New York State Medical Society, for 1860) showing the microscopical appearances of a sample of milk taken from a cow in a state of high fever from inflammation of the bowels. It contained broken-down fat globules and a low form of vegetable growth called conferva. It also contained blood corpuscles, and was scanty and blue.

George Fleming, F.R.G.S., etc., in his "Manual of Veterinary Sanitary Science and Police," says, in reference to the milk of cattle affected with anthrax: "The examples of its pernicious effects are not numerous. Gohier mentions that he has known a case in which a man was attacked with severe diarrhœa, from consuming the milk of a cow affected with anthrax. He also witnessed the same occurrence in a family of five persons. Morris reports a similar occurrence. Chisholm gives the case of a girl, three years old, who presented all the symptoms of anthrax from drinking the milk of a diseased cow. Desplas has given some instances, noted during the epizoöty of anthrax at Quercy, in which the malady was transmitted to other creatures by the milk."

Blyth (Ed. 1882) relates the following: "*A new form of febrile disease associated with milk*—The milk from a dairy near Aberdeen appears to have been the propagating agent of a peculiar and entirely new malady. This remarkable outbreak has been investigated and described with great ability by Dr. Ewart. Twenty persons were attacked, and there were three deaths.

The symptoms consisted essentially of fever, with one or more relapses, and swelling of the cervical glands, frequently ending in suppuration. The connection of the epidemic with the milk supply was established by the fact of the illness being confined to those who drank the milk, as well as by the microscopical appearance of the milk, and some well-devised experiments on animals.

"The microscopic appearances of the milk showed:

"1. Numerous micrococci, some free, others in groups or chains.

"2. Numerous spores and cells of the yeast plant.

"3. Spores similar to bacteria anthracis.

"Some pus from the neck of one of the patients was found to contain bacilli and spores apparently identical with those found in the milk, and such pus caused fatal illness when injected into small animals subcutaneously. These elements were submitted to cultivation, and a variety of experiments on rats were instituted with the suspected milk, side by side with control experiments with healthy milk, the main result being to prove satisfactorily a direct connection between the bacilli and the disease.

"The evidence pointed to a contamination of the water supplying the dairy, and the author concludes that the organism producing this new fever was morphologically not unlike the anthrax organism in its mode of development and life history; and, further, that it was introduced into the milk after it had left the udder."

If Blyth's opinion is correct as to the source of the contamination being the water, though he does not state the evidence that led him to this conclusion, then this would bear more strongly on the danger of adulterating milk with water.

The production of tuberculosis with milk by inoculation and ingestion, it is asserted, was first accomplished by Gerlach, of Berlin. He asserts that the infectious properties of this fluid can be no longer denied. The details of his experiments may be found in the *London Veterinary Journal*, Vols. 8, 9 and 10.

"These and other more recent experiments prove *that the milk from cows with tuberculosis is not only harmful, but that it also contains elements of a specifically dangerous character; it is capable of generating elements of a similar character; it, therefore, bears the character termed infectious.*"

Böllinger fed three pigs, three calves, one sheep, two dogs, two cats and eight rabbits on the unboiled milk from a tuberculous cow; of the three pigs he produced the disease in one — failed in the other two; of the three calves he produced the disease in two; he produced the disease in one sheep, and failed in the case of both cats and dogs; of the eight rabbits he produced the disease in two, and failed in six. He failed to produce the disease in fourteen rabbits fed with milk boiled.

Gerlach produced the disease by feeding the unboiled milk of a tuberculous cow to two calves, two rabbits, two pigs and one sheep.

Blyth states that "the accidental infection of a large St. Bernard dog, which, having come across the milk designed for one of the experiments drank it, and became tuberculous, is perhaps more striking than a formal experiment." * *

It seems to be pretty well established that a variety of consumption in the cow, called "perlsucht" by the Germans, is identical with a form of tuberculosis in man. Charles Creighton, M.D., of the University of Cambridge (London *Lancet* of June 19, 1880), found in the post-mortem examination of seven cases of death from consumption conditions identical with those of perlsucht.

The *British Medical Journal* of December 2, 1882, in giving a a review of a German work edited in Berlin, says: "Prof. Johne, of Dresden, contributes the article on pearl disease and tuberculosis of cattle, which he maintains to be identical with human tuberculosis, and to be communicable by means of the milk." *

There have been numerous failures in endeavoring to communicate this disease, by all experimenters, but they would not militate against the successes unless they were in a very large proportion, as we all know that of many who are exposed to contagious and infectious diseases but comparatively few contract the disease.

Doubtless many injurious effects are imparted to milk from the careless manner in which it is often kept and handled after being taken from the cow. * *

It is also thought by some that the so-called blue milk — that is, milk characterized by a low form of vegetable growth which has the property of imparting a blue color to the milk — is due to the want of cleanliness in the dairy. This milk has produced fatal effects in children.

There is a form of milk which is covered with yellow transparent patches, and has in it bubbles containing gas. But little butter can be made from this milk, and that quickly decomposes, and the milk has a bad taste. Fleming says: "This alteration appears to be due to the ferment, and may be artificially excited by vegetable acids; bad dairies and uncleanliness are the favoring circumstances."

Another important consideration of cow's milk is in relation to its forming the basis of diet in the treatment of exhaustive diseases, and also as the curative agent in the treatment of many diseases.

From a table in Letheby's work, "On Food," we find:

		Per Cent.
Lean Beef without bone	Water	72
	Albuminoids	19.3
	Starch	....
	Sugar	....
	Fat	3.6
	Salts	5.1
		100

		Per Cent.
New Milk	Water	86
	Albuminoids	4.1
	Starch	...
	Sugar	5.2
	Fat	3.9
	Salts	.8
		100

According to the above figures lean beef contains 28 per cent. of solids and milk 14; that is, one-half; so, if a pint of milk weighed a pound, one quart would contain as much nutrient solids as one pound of lean beef (of course fat beef would contain a much larger proportion of solids). Another method of determining the nutritive value of foods is based upon the amount of carbon and nitrogen they contain; and comparing that with the amount of the same required to sustain the body. Dr. Edward Smith found the amount of food upon which a class of people in Lancashire, England, were able to live during a cotton famine to contain for an average adult, per day:

Carbon (grains).	Nitrogen (grains).
4,100	190

And from a table constructed upon this basis in Letheby's book we find beef and milk contain the following comparative amounts.

	Grains, Carbon.	Grains, Nitrogen.
1 lb. beef....................	1,854	184
1 lb. new milk (about 1 pint)..	599	44

We see by this method of comparison that a little over three pints of milk are equivalent to a pound of beef. But there is a great disparity in the proportion of the ingredients in beef — a large excess of albuminoids and a diminution of carbohydrates; then, there is considerable loss in cooking beef. Furthermore, beef is much more difficult of digestion than milk, and as the diet of the sick (especially in fevers) is fluid, beef enters into it only in the form of teas, soups and the so-called essences or extracts, and its value then as compared with milk may be estimated from the following facts: "Liebig's extract of meat," one of the best liquid forms of meat, and which enjoyed a great reputation a few years ago as a food for the sick, and is yet used, contains, according to Letheby, only from three to four parts of the 26 to 30 per cent. of solid nutrients of beef, and one-quarter of these are salts; the other three-quarters consist of unknown extractive matters, and there is no albumin nor fat. Perhaps it is needless to say that milk has pretty nearly supplanted all these as the basis of food in exhaustive diseases, especially fevers.

The egg presents a greater concentration of nourishment than milk, and when raw is as easily digested, but few can tolerate raw eggs; besides, without the shell it is deficient in the variety of principles, and, according to our experience, it is too concentrated for fever patients; and if diluted with any thing palatabe besides milk it is inferior to it. * *

The addition of lime-water to milk is known to favor its digestion. * *

It is the casein of milk which seems to be the part most difficult to digest, and the new development is to partially digest this outside of the body by an animal ferment known as pancreatine. The milk so digested is called "peptonized." The writer has had considerable experience with this, and is convinced that milk is rendered much easier of digestion by this process.

From the little knowledge attainable it seems that milk (except the ash in adults) is as completely assimilated after digestion as meat or eggs.

Milk is also found to be the best article in which to administer stimulants. By thoroughly incorporating spirituous liquors with milk their irritating effects upon the stomach are nearly obviated. * *

The date of the "milk-cure" extends away back into the childhood of medicine, and has experienced the vicissitutes attending the passage from youth to old age. Perhaps its greatest efficacy is in chronic stomach and bowel troubles. It has a high reputation as a cure for diabetes, and many cures have been reported. The various "dropsies" have been successfully treated by it. It is used in "Bright's disease" and gout with much benefit, and the hereditary tendency of the latter has been removed by its persistent use. Diseases of the heart and blood-vessels have been much improved by a milk diet. Certain forms of skin diseases have been cured by it, and we all know its value as a diet for consumptives, etc.

Finally, milk is rapidly taking the place of blood in the operation known as transfusion. This seems a natural result from the close resemblance it bears to that fluid. It has been said that "milk is blood without the coloring material." Dr. Hodder, of Canada, saved two out of three cases of cholera, after they had reached the stage of collapse, by transfusing milk into their blood; and cases of hemorrhage, after child-birth, have been successfully treated by this means. It is needless to state that milk must be absolutely pure for this purpose.

The local authorities of Brooklyn, but a few months ago, had occasion to revoke the license of a milk-seller for selling milk from a consumptive cow or cows.

Though a cow suffering from a most fatal malady may give milk in which there cannot be found by chemical analysis or microscopic examination any deviation in quality (there is always a decrease in quantity) from the normal, it seems almost impossible for an observer of diseases in the human being, if to judge only by analogy, to believe but that it must be injurious.

There should be means provided so that rigid inspection, by competent men, could be frequently made of the health and surroundings of all cows whose milk is to be sold for consumption.

In addition to the above, I wish to report the following work done by me: Whole number of samples of milk examined, 76; milk analyses, 23; prosecutions, 6; number convicted and fined $25 each, 4; butter analyses, 16; samples of butter procured, 5. —*From First Annual Report of New York State Dairy Commissioner.*

Diabetes.—Buckwheat as an article of diet relieved glycosuria, and attending symptoms, gastric distress, pain in the eyes, etc., in a case reported in the *New York Medical Record*, May 16, 1885, by Dr. A. M. Duncan, Hamler, O.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D., A. VAN DER VEER, M.D., LORENZO HALE, M.D.
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. JULY, 1885. NO. 7.

EXCHANGES.

The Quarterly Epitome, New York, March, 1885, gives a complimentary notice of the ALBANY MEDICAL ANNALS and our appearance "with burnished armor," referring to the Society seal on our cover. The same number has transferred to its pages "The Vectis and Macrotin," by W. E. Rogers, M.D., Rexford Flats, N. Y., from the ALBANY MEDICAL ANNALS, January, 1885. It favors Albany further by printing "The Third Stage of Labor; Obstetric Hints," one of a series of papers by J. Savage Delavan, M.D. (A. M. C., '61), Albany, taken from the *New York Medical Times.*

The Medical Analectic, G. P. Putnam's Sons, New York, February, 1885, *The Medical Summary*, Philadelphia, February, and the *Quarterly Compendium of Medical Science*, Philadelphia, April, copy "The Vectis and Macrotin" from ALBANY MEDICAL ANNALS. *The Western Medical Reporter*, Chicago, April, gives an abstract of it.

The Medical Summary, January, 1885, on page 200, reprints "Treatment of Acute Alcoholism" as practiced in the Albany Hospital, taken from THE MEDICAL ANNALS of 1880, page 63.

The Canadian Practitioner, Toronto, May, and the *American Medical Digest*, June, take from ALBANY MEDICAL ANNALS, January, 1884, a part of "Mr. Lawson Tait's Operations at the Albany Hospitals," by Drs. Van der Veer and Boyd.

The *Albany Evening Journal*, June 29, prints part of the editorial reference, in our June ANNALS, to Governor Hill's attitude toward the State Board of Health.

The New York Medical Journal, July 4, under the heading of "The Hygiene of the Lying-in Chamber," reprints from the Albany Medical Annals for June a part of Vice-President Perry's semi-annual address before our county medical society.

The Albany Alumni Lectures for March 3, 1886, are also noticed in *The New York Medical Journal.*

BOOKS, ETC.

Cholera; its Cause, History, Prevention and Cure. A lecture delivered under the auspices of the Young Men's Christian Association, at Geological Hall, Albany, N. Y., May 28, 1885, by W. O. Stillman, A.M., M.D. (A. M. C., '78). Brandow, Barton & Co., printers and publishers, Albany, N. Y. 16mo, 45 pp., price 15 cents.

"It never rains, but it pours." Following closely after the book on Cholera, by Dr. E. A. Bartlett, noticed in our last number, comes this readable book on the same subject.

The author expresses his indebtedness to the Congressional Report on the Cholera Epidemic of 1873, to Sanitary Circular No. 1, issued by the Dublin Public Health Committee, the recent Report on Disinfectants by the American Public Health Association, etc. Hence, there is some backing for the statement on the last page of the book, to wit: "If a tithe of the advice which I have dealt out so lavishly is heeded and followed, as indicated by all previous experience, our city will have little to fear should cholera appear." Dr. Carroll's commendation,which is printed on the cover, seems to have been an echo of this same sentence.

In reference to Koch and his comma bacillus, the view is expressed that "whether he has succeeded in distinguishing the special organism which causes the disease, or not, there can be no doubt that it [the disease] is produced by bacteria."

The field in which this book seeks a circulation is the general public, which is thus addressed: "Intelligent co-operation on your part will add greatly to the effectiveness of the work of the sanitary and medical authorities, should the pestilence visit us this summer."

The style of the writer is easy and popular, and the material given is of the kind which the public demand.

SANITARY SUGGESTIONS ON HOW TO DISINFECT OUR HOUSES. Prepared for popular perusal by B. W. Palmer, M.D. George S. Davis, publisher, Detroit, Mich.

One of the most satisfactory features in the outlook upon sanitary work is the evidence, in many directions apparent, that the public mind is becoming alert upon it. It is to be sincerely hoped that not a single case of cholera will appear in America this summer, for then we should have secured gratuitously an enormous good in the awakening and instruction which the people have received in cleanliness. Nothing short of the cholera scare would have produced so much of an effect. The pamphlet with the above title is another of the products of the occasion, and it will probably be profitable, because the people are ready to read any thing that will help avert the disease. The committee on disinfectants of the American Public Health Association not long since made a preliminary report, and Dr. Palmer appears to have taken much of his inspiration from it; considerable quotations are made from it. It is needlessly severe on one old and reliable disinfectant, as is the committee in their report; that is sulphate of iron; even if this does not answer the requirement of a strict definition of a disinfectant in not being a germicide, abundant experience has established its value as a certain, safe and cheap agent for the destruction of morbific products of decomposition. It is yet to be proven that destruction of germs is essential to disinfection. The little work of sixty duodecimo pages is a very good compilation of facts relating to cleanliness and disinfection, and is commendable as an epitome of much that is related to this highly important subject, and for containing suggestions that all will find useful. Whether the various disinfectant preparations in the appendix, and which perhaps constitute the *raison d'être* of the publication, are to be likewise recommended is a question. Not but that all are good, but because people ought not to be taught that expensive proprietary preparations are the only resource, when equally valuable agents can be procured at a trifling cost. Several of them are also unsafe for popular use, from their poisonous constituents, unless a warning label accompanies them. Physicians and other intelligent persons may use them in the lack of ready information on the general subject of disinfectants, and will find them, and the suggestions given in this book, of value. There is a need of a popular print, in the form of a circular on disinfectants, that shall be beyond several criticizable points in the Public Health Association report, and it is to be hoped that a competent person or health board will prepare one.

F. C. C.

Berlin as a Medical Center. A Guide for American Practitioners and Students. By Horatio R. Bigelow, M.D., Member of the American Medical Association; of the Medical Society and Medical Association of the District of Columbia; of the Anthropological and Biological Societies of Washington, D. C. Reprint from the *New England Medical Monthly*. New England Publishing Co., Sandy Hook, Conn.

This little book of 117 pages is a valuable one for an American practitioner who wishes to spend a few months in the study of gynæcology in Berlin. It is divided into six chapters. The first chapter treats of the cost of the trip and of the best way of reaching Berlin. The author thinks that by exercising the strictest economy it is possible to study medicine six months in Berlin and to make the journey to and fro for $204. He recommends highly the Red Star line of steamers. Chapter second describes the arrival in Berlin and the best way to procure board and rooms; a list of many of the restaurants and boarding-houses being given. Chapters five and six consist of a map of the city, a directory of its streets and a list of some of the principal stores, while chapters three and four are devoted exclusively to medical matters. In the fourth chapter the manner of matriculation is described, and a partial reprint of the university catalogue (in Latin) is given. In the same chapter the catalogue of the courses held in vacation time is given, and the different gynecological and obstetrical clinics are described at length, a few remarks being also made about the courses in surgery, pathological anatomy and histology. Nothing is said about the courses in clinical medicine, nor in the physical examination of patients, nor about those on diseases of the throat, ear, skin, urinary, generative nor nervous organs, although Berlin is probably the best place in the world for the study of nervous diseases. The book is, therefore, of especial value to the student of gynecology, although the author states that "New York, as a school of gynecology is far ahead of Berlin, both in the manner and the matter thereof;" and, again, "No city in the world offers greater advantages of study to the practitioner than New York."

H. HUN.

BRYANT ON THE PRINCIPLES AND PRACTICE OF SURGERY. Edition 1884. Henry C. Lea's Sons & Co., Philadelphia.

We have had occasions to endorse the previous editions of this work, and can only repeat what we have before said — that we consider it the best for the student and busy practitioner. The author is now in the prime of life, and gives us not only the result of his own great surgical practice, but also the knowledge acquired from extensive reading. As is ever the case, the publishers have completed their task with the utmost accuracy.

A. VAN DER VEER.

MODERN THERAPEUTICS OF THE DISEASES OF CHILDREN, WITH OBSERVATIONS ON THE HYGIENE OF INFANCY. By Joseph F. Edwards, M.D., Editor of the *Annals of Hygiene;* Associate Editor of the *Medical and Surgical Reporter;* Author of "Bright's Disease and its Treatment;" Fellow of the College of Physicians, Philadelphia, etc., etc. Philadelphia: D. G. Brinton. 1885. Octavo, 364 pp. $2.00.

The views of the most eminent specialists in pediatrics, both American and foreign, are here condensed and "pigeon-holed" ready for instant reference. Three indices — of diseases, remedies and authors — add to the convenience of the book. The first twenty-five pages are occupied with "Hygiene and Clinical Instruction," taken from twenty-five different authors, of whom more than half are British and European. Then follows the alphabetic list of diseases, and, besides the notes of treatment by eminent men, there is a string of remedies with their indications. The material is not injured by the fact that much of it has appeared in the *Medical and Surgical Reporter* and the *Quarterly Compendium*, of Philadelphia; for the most that is new is first brought out in medical journals, and this reference book gives treatment up to date, in more accessible and convenient form than can be done in a serial.

A number of the new items have been printed in the "Abstracta" of THE MEDICAL ANNALS, and we are gratified to notice Dr. J. W. Moore's (Cohoes, N. Y.) "Treatment for Diphtheria" reprinted from THE MEDICAL ANNALS, page 171, June, 1884.

L. H.

The Voice. Funk & Wagnalls, 10 and 12 Dey street, New York, weekly, $1.00 a year, contains temperance discussions, both moral and medical, sermons by Talmage and others, news, etc.

MEDICAL NEWS.

NEW YORK STATE MEDICAL ASSOCIATION.

The second district branch held its first annual meeting in the United States Hotel, Saratoga Springs, Tuesday, June 23. Five delegates, thirty-nine members and ten invited guests were present.

Dr. R. C. McEwen, of Saratoga Springs, made a welcoming address, and Dr. W. H. Robb (A. M. C., '65), of Amsterdam, the president, delivered an inaugural, after which the following named medical papers were read and discussed: "Gynecological Notes," by Dr. Samuel Peters, of Cohoes; "Commercial Preparations," Dr. Henry C. Van Zandt (A. M. C., '65), Schenectady; "Case of Foreign Body in Right Bronchus, and Expulsion after nearly Ten Months," Dr. E. D. Ferguson, of Troy; "Atrophy of Left Optic Nerve, with Absence of Light Perception for Three Years, with Subsequent Useful Vision," Dr. H. E. Mitchell, of Troy; "Pelvic Hematocele; its Diagnosis and Treatment," Dr. W. Wotkyns Seymour, Troy; "Pneumonia and its Treatment," Dr. J. P. Garish, Troy; "A Case of Enterolith," Dr. W. B. Sabin (A. M. C., '82), West Troy; "A Disputed Diagnosis," Dr. J. C. Hannan, Hoosick Falls.

The executive committee were re-elected.

The annual banquet was enjoyed by guests and members.

NEW YORK STATE BOARD OF PHARMACY.

At the recent examinations there were forty-five candidates, of whom the following twenty-four were successful, and were granted certificates of registration: Otto Scholz, Albany; N. P. Brainard, Andover; O. P. Rose, Canaseraga; H. S. Potter, Carthage; A. M. Guffin, C. McCullock, Central Bridge; C. Arnold, Clifton Springs; F. G. Martin, Colesville; C. E. Zimmerman, Frankfort; N. F. Yates, Geneva; D. T. Horton, Gowanda; W. R. Cobb, Haverstraw; E. R. Ziebach, Lake George; J. T. Shillinglaw, Malone; L. H. Smith, Newark Valley; J. L. Peck, Oswego; M.Schmitz, Poughkeepsie; H. R. LeValley, Pratsburg; B. P. Sherman, Richville; C. A. Guebell, G. Hahn, Rochester; G. L. Hill, Utica; W. B. Bissell, Waterville; J. M. Thompson, Watkins.

PERSONALS.

—Dr. Joseph A. Flynn (Albany Medical College, class of '84), after his term of service as resident physician and surgeon in St. Peter's Hospital, Albany, settled in Pittsfield, Mass., last April. Soon after opening his office he performed an ovariotomy, and the patient has now completely recovered.

—Dr. Laurentine Rouchel has moved from Albany to Croghan, Lewis Co., N. Y.

—Dr. Edwin B. Atkins ('74) was married at Essex, N. Y., June 18, to Miss Anna Noble Ross.

—Dr. A. M. Leonard ('83), 217 Park avenue, Albany.

—Dr. John V. Hennessey ('84), 872 Broadway, Albany.

—Dr. S. E. Armstrong ('85), Passaic, N. J.

—Dr. Terrence L. Carroll ('85) has received an appointment from Dr. Lewis Balch, at the Alms House, Albany.

—Dr. Andrew C. Crounse ('85), Melrose, Rensselaer Co., N.Y.

—Dr. Alex. L. Johnson ('85), of Gloversville, N. Y., is assistant at Chambers Street Hospital, New York.

—Dr. Elmer E. Larkin ('85) is junior assistant physician at the Albany Hospital.

—Dr. Albert Marsh ('85), 197 Lancaster street, Albany.

—Dr. James P. Marsh ('85), with Dr. E. D. Ferguson, Fifth street and Broadway, Troy, N. Y.

—Dr. M. McHarg ('85), Dunnsville, Albany Co., N. Y.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

ABSTRACT OF MINUTES OF THE STATED MEETINGS OF JANUARY 28, FEBRUARY 11, APRIL 22, AND OF THE SEMI-ANNUAL MEETING OF MAY 12 AND THE SPECIAL MEETING OF MAY 26, 1885.

A regular meeting was held Wednesday evening, January 28, 1885, at Alumni Hall.

Vice-President Perry and Drs. T. P. Bailey, W. H. Bailey, Bartlett, Bigelow, Boyd, Cook, J. D. Craig, DuBois, Culver, Curtis, William Hailes, L. Hale, Hall, Huested, H. Hun, March, Mereness, Morrow, Munson, Snow, Stonehouse, Thompson, Townsend, Trego, Van Allen, Van der

Veer, and Ward—28; also Drs. Charles H. Hoyt, secretary of the State Board of Charities, and S. A. Russell, of Albany, and many students.

The minutes of the preceding meeting were read and approved.

Dr. A. Van der Veer, Dr. J. P. Boyd and Dr. F. Townsend, Jr., reported cases of Ovariotomy—Tait's Operation.

Dr. Ward moved that, owing to the lateness of the hour, the discussion on the papers be postponed until the next meeting. Carried.

The resolution offered by Dr. Thompson at a previous meeting was discussed, and action thereon postponed until the next meeting.

The Secretary called attention to the fact that several gentlemen who had formerly been active members, and by reason of removal from the county had become non-resident members, had now returned to the county and wished to be reinstated in active membership.

After discussion the Secretary was, on motion of Dr. Ward, instructed to place upon the list of active members the names of non-resident members, in good standing in the profession, who should make application to be restored.

Adjourned. Jno. Ben. Stonehouse, *Secretary.*

A regular meeting of the Medical Society of the County of Albany was held in Alumni Hall, Albany Medical College, Wednesday evening, February 11, 1885.

In the absence of the President, Vice-President and Secretary, Dr. Van der Veer moved that Dr. Craig act as President *pro tem.* and that Dr. La Moure act as Secretary. Carried.

Dr. F. Townsend, Jr., read a paper on "Ovulation and Menstruation Considered in their Physiological Relations." Discussed by Drs. A. Van der Veer, S. B. Ward, D. C. Case, J. P. Boyd, D. H. Cook. [See page 97.]

President Featherstonhaugh appeared and assumed the chair at the conclusion of Dr. Townsend's paper.

Unfinished discussion on Dr. Van der Veer's paper on "Taits Operations," read at the previous meeting, was resumed by Drs. F. Townsend, Jr., S. B. Ward, A. Van der Veer, J. M. Bigelow, D. H. Cook, D. C. Case, J. P. Boyd.

Adjourned. U. B. La Moure, *Secretary pro tem.*

A regular meeting was held in Alumni Hall, Wednesday evening, April 22, 1885.

In the absence of the Secretary, Dr. Lorenzo Hale was appointed *Secretary pro tem.*

A note from Secretary Stonehouse was read stating that an unexpected engagement detained him, and asking the Society to take action as to the publication of the list of members' addresses and office hours.

It was decided to publish the list as usual in the Albany City Directory and in the Albany Medical Annals.

Dr. T. F. C. Van Allen then read the paper of the evening, entitled "The Diagnostic Value of the Tuning Fork in Diseases of the Ear." [See page 170.] After discussion, Dr. F. L. Classen exhibited four sets of pathological specimens, with histories and descriptions, as follows:

ANEURISM OF AORTA.

Mrs. G. M., aged 61 years, was endeavoring to take a ring from the finger of a lady friend who had died suddenly on the day previous. She fell to the floor exclaiming, "The finger is warm," and immediately expired. A post-mortem was held March 1, 1885. The pericardium was distended with fluid and clotted blood—about sixteen ounces; the aorta was studded with atheromatous deposits, an opening being found where the aorta had ruptured into the pericardium. Other organs normal.

CALCIFIC DEPOSITS IN THE PLEURA.

Mrs. McG., aged 65 years, died suddenly April 19, 1885, her husband having been arrested on suspicion of having poisoned her. A post-mortem examination revealed the following: Body poorly nourished; strong adhesions of both lungs; on left side a circumscribed abscess between pleura pulmonalis and pleura costalis containing about six ounces of pus; also on left side calcific deposits along pleura costalis. Heart—ossification along semi-lunar valves and coronary arteries. Marked atrophy of liver. Right kidney cyanotic in appearance. Left kidney enlarged and congested. Stomach contained about two ounces of dark-colored odorless fluid. Brain normal. The stomach, œsophagus and brain showed no evidences of any narcotic or irritant poison, death being caused by atheroma of coronary arteries and valves of heart.

AN ANENCEPHALIC MONSTER,

found in a box floating in the canal.

HYDRO-NEPHROSIS.

Two contracted kidneys, with partial hydro-nephrosis.

The usual collation was served after adjournment.

Lorenzo Hale, *Secretary pro tem.*

The semi-annual meeting of the Society was held at Alumni Hall, Tuesday, May 12, 1885, at 3:30 P. M.

Present: President Featherstonhaugh and Drs. Archambeault, T. P. Bailey, Bendell, E. E. Brown, D. C. Case, H. S. Case, Classen, Cook, J. D. Craig, Curtis, Fleischman, Freeman, Hailes, Hale, Hall, Hays, H. Hun, Lyon, March, Moore, Morrow, Munson, W. J. Nellis, Perry, Rouchel, R. H. Sabin, W. B. Sabin, Snow, B. U. Steenberg, Stonehouse, Thompson, Tucker, Van Allen, Van der Veer, Van Slyke; also Drs. W. O. Stillman, T. D. Morrill and N. Emmons Paine.

The Board of Censors, having examined the credentials of the following gentlemen, unanimously recommended their admission to membership in the Society: Drs. Selwyn A. Russell, John H. Skillicorn, Frederick D. Morrill.

On motion the Secretary was authorized to deposit a ballot for the candidates named in the censors' report, and they were declared elected to membership.

Dr. **Hale** proposed Dr. Louis E. Blair for membership. Referred to Board of Censors.

Dr. **Hale** moved that the Treasurer be instructed to pay $15 for the publication of official list of members and office hours for the years 1882, 1883 and 1884. Carried.

Dr. **Thompson** withdrew his resolution presented at a previous meeting providing for the appointment of a committee to take charge of the decoration of the meeting room and procure portraits of the members, as he was satisfied that a committee, consisting, of Drs. Freeman, Thomas Featherstonhaugh and T. P. Bailey, was already in existence.

On motion of Dr. Snow, Dr. March was appointed a member of the committee in place of Dr. Thomas Featherstonhaugh, removed from the district.

Dr. T. **Kirk. Perry** then delivered the semi-annual address. [See page 161.]

Dr. **Snow** moved that a vote of thanks be tendered to Dr. Perry for his able address and that a copy be requested for publication. Carried.

On motion the meeting adjourned.

A special meeting was held on the evening of May 26, 1885, at Alumni Hall.

Present: President Featherstonhaugh and Drs. T. P. Bailey, Bartlett, Bendell, H. S. Case, Curtis, Devol, Hailes, Hale, La Moure, M. J. Lewi, Munson, Murphy, W. J. Nellis, Russell, Scattergood, Stillman, Stonehouse, Townsend, Van Allen, Van der Veer, Van Slyke, Ward.

Dr. **Ward**, after reviewing the history of the efforts of Dr. Gunn to organize an eclectic medical college in New York city, without complying with the requirements of the general law providing for the incorporation of medical colleges, read the bill which had passed the last legislature and now before the Governor, establishing the New York College of Medicine and Surgery. He said that this bill was "special legislation," that it contained provisions not covered by its title, and that the Board of Regents of the University of the State of New York had already acted on the application of Dr. Gunn and refused it. The doctor also called attention to the fact that the bill conferred power upon the proposed colleges which were possessed by none others. He then presented the protest prepared by the New York County Medical Society, which had been signed by its officers, the officers of the State Society and the faculties of the medical colleges in New York City and Albany. He also moved that the President and Secretary be instructed to sign this protest on behalf of the Society. Carried.

On motion of Dr. Curtis the vote was made unanimous.

Dr. **Curtis** moved that Dr. Ward be authorized to present this protest to the Governor on behalf of this Society. Carried.

Adjourned.

Jno. Ben. Stonehouse, *Secretary.*

ALBANY

MEDICAL ANNALS:

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VOL. VI. AUGUST, 1885. No. 8.

A PORCELAIN STEM PESSARY.

BY EPHRAIM CUTTER, M.D., NEW YORK.

[CONTRIBUTED TO THE ALBANY MEDICAL ANNALS.]

The object of the stem pessary of the writer is to reduce uterine flexions and displacements by straightening out the former as on a splint, and by holding the uterus *in situ naturali.* Elsewhere* the subject is treated at some length, so that only a brief reference to the principles that govern the application of the instrument is required here. With a case in hand one should see that the uterus is normal in size; that hyperæsthesias of vagina and uterus are removed; that no complication of tumor, abscess or conception exists; that the patient is under control — can and will keep quiet if necessary (better for the first trial to be in bed undressed). If on application there is too much irritation set up, as shown by chills, fever, tenderness on pressure on the abdomen, and on the pessary, heat of the vagina, etc., the patient's physician, or she, should remove the instrument, apply fomentation to the abdomen, keep at rest in bed, and use such remedies as may seem best to the attending physician. Thirty grains of iodoform in gelatine capsules may be used twice a week in the vagina, and after a time the attempt may be renewed to apply the pessary.

If, after a few trials, the instrument is not tolerated, the case must be relegated to the category of those that are unable to wear a stem pessary, *for there are such*, and some, perhaps nearly all, practitioners include all women in this class, for it has been said publicly that "no stem pessary can be worn." This positive dictum was not because of the imperfections of the present stem as to mechanical principles, for it keeps the uterus *in situ naturali* without absolute immobility, does not get out of order readily, can be worn (despite the dictum above) for months, and after once being applied and fitted does not need much attention from the physician. The great objection lies in the fact of the stem being intra-uterine, producing discharges, irritation or inflammation, with its sequelæ. This being the case, attention has been given to procuring for the stem a material which is least irritating, and which at the same time is mechanically workable.

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* "Contribution to the Treatment of Flexions and Versions of the Unimpregnated Uterus." Boston: J. Campbell & Son. 1876.

At the time of the invention of the stem in question, hard rubber was used, as it was conceded to be the best material for the purpose, although hard rubber is a composite substance of an organic nature (rubber) and a metallic element (sulphur). Still, not much objection has been raised to its employment as an appliance in and about the human body cavities. Indeed, in the experience of the writer, as an intra-uterine stem it has done well in many cases, but in others it has produced discharges, sometimes of a fetid and bloody character.

In looking about for a substitute, the writer directed his attention to dentistry, which probably makes more permanent artificial applications to the mucous membranes of the human body that any other art, if we except that of the tobacconist.

The most used material in dentistry is vulcanized rubber plate, colored red with mercuric sulphuret. I was always prejudiced against this material for intra-uterine use, on account of the mercury. I never could be divested of the feeling that the combination of mineral teeth, rubber, sulphur and mercury would not act otherwise than as a galvanic battery in the mouth or uterus, and thus do harm. What I have seen confirms this view, and there is no doubt that many cases of chronic disease are aggravated, if not caused, by the use of mercurial rubber plates. Hence I never used it for the stem pessary. I supposed that the common black hard rubber plates were innocuous, because free from mercury, and hence would answer for the stem, until I saw a case where a young unmarried woman had worn a hard rubber plate on the upper jaw for some time, with eyes sore, ears deaf, face spotted with sores, with gingival margins of upper alveolar process covered longitudinally with a pediculate proliferation, soft and boggy, was I convinced that hard rubber was noxious for internal uses sometimes; for when a porcelain plate, to be described, was substituted, in one month's time the deafness left, the sores on eyes and face healed, and the proliferation had nearly disappeared. A good aurist and oculist had failed to cure this case by local treatment. Further investigation of the plate which cured, showed it to be made of silica, feldspar and quartz in its entirety of substance, teeth and all. See specimen plates of mineral teeth.

The following points seem worthy of note:

1. The mineral plates agree with the oral tissues, so that they continuously fit tightly and firmly. Rubber plates are apt to get loose, because of absorption of substance of the jaw.

2. The mucous membrane and alveolar processes grow up into close contact with the mineral plate.

3. New bone forms under the plate in the alveolar processes.

4. They are unacted on by the botanical and chemical fluids found in the mouth and pharynx.

5. The plate is never broken inside the mouth, though when ejected on to the floor by coughing or sneezing, or when subject to blows or shocks outside the mouth, they break. Because a watch is damaged by falling it is not regarded as a detriment to its use as a time keeper.

6. Being made of mineral earths, there is no galvanic action like that which sometimes occurs with even platinum plates, as shown by the following case:

April 2, 1884, I saw Mrs. C., 228 East 12th street, New York, an elderly lady who said she had worn false teeth for many years. A platinum plate gilded with gold was used for the upper jaw, in combination with a red rubber set for the under jaw. These were worn for four years without tronble, when she had a bad sore mouth and throat, which she thought proceeded from her stomach, and for which she had medical aid to no avail, but when four years ago both upper and lower sets were replaced by the mineral plates, immediately her mouth and throat got well, and have remained so ever since. It would seem here that the combination of platinum upper plate and vulcanized rubber for lower jaw formed a galvanic battery, excited by the mouth juices, which caused the local oral inflammation, as proved by the history of the case.

The cure in this case was so closely connected with the change of plates that connection between cause and effect was clearly seen; besides, so many other cases present the same connection that I think it would be mulish to deny it, and I feel fully justified in presenting these statements. The dentist who made these plates is Dr. W. E. Dunn, 39th street and Lexington avenue, New York, to whom I acknowledge my indebtedness, for without his aid I could not have had porcelain pessaries.

So far as my investigations have gone into the workings of the mineral plates, the evidence points all one way — to their superiority to any other material for false teeth.

Red rubber plates may not only cause diseases of the mouth, but of other parts of the system. In chronic cases of disease, the oral cavity should be examined to see if false teeth are not undermining the health of the patient, in addition to other lesions.

With this introduction, the special application of mineral, stone or porcelain to the material of the stem pessary aforesaid is in order.

The manufacture has been found difficult, owing to the plastic condition to which the material is reduced by the high heat of the refractory furnace — about 4,500 degrees. Sometimes the stems bend out of shape and curl to look like a hook, so the longitudinal accuracy of the lathe finish of the hard rubber must not be expected. Still, it is susceptible of high lustrous polish like the mineral teeth and plates, which are as smooth, shiny and pearly as the natural specimens.

Another mechanical difficulty is the immovable disc. This has not been overcome yet. In cases when the flexion straightened out by the uterine sound immediately returns on the withdrawal of the sound, it will be necessary to use the ordinary hard rubber stem with movable disc,* until, so to speak, the "spring" has been taken out of the uterus, and it will remain in place long enough to get in the percelain stem, which, when introduced, is to be worn continuously until the lesion of place is cured. It is worn through menstruation. The menstrual fluids flow readily by the smooth surface of the stem. There is no need of a groove in the stem, as some have suggested. The instrument should not hurt the patient, nor press on any part to make it sore; if so, the iodoform can be used inside the vagina by the side of the stem, and in case this is ineffectual, the case should be remeasured and either the pesssary changed in its curves by heating over a flame, or a new one should be substituted that corresponds better to the vagina and perineum.

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* In the work referred to above, the advantages of the movable disc are described. It is enough here to say that tho disc is held by a bayonet catch, and can be let down on the body of the stem, so as to allow the stem to enter the uterus closely by the side of the sound previously introduced. Lately I had a case where I could not introduce the porcelain stem, while the movable disc stem was applied with facility.

Dr. Sims once said when he was told a story, "Give me details; the failure of communicating ideas is the absence of details." The following are some details:

It happens sometimes, when an instrument is fitted properly, that after a time the hook presses on the perineum. This means that the uterus is rising in the pelvis to its proper place. In many cases of versions and flexions there is a sagging, or to use a vulgarism, a "squashing" down of the uterus and vagina in the pelvis. Of course when the uterus is first reposited and straightened by the sound it is not elevated in the pelvis, since the contraction of the vagina and the uterine supports would press too heavily on the disc and cause irritation and other trouble; hence, in our opinion and practice, the organ should be held in this position on the smooth upper surface of the disc until it rises of itself by regaining the former elasticity and strength of the uterine supports, so that the necessity of substituting a longer pessary is no objection; on the contrary, it is a recommendation, since it shows that one object of artificial uterine support has been gained, to wit, the restoration of the power of the uterine supports to elevate the organ *ad situm naturalem.*

I tried to combine one stem with bodies of different lengths, so that all the physician would have to do would be to simply change the body, and not the whole instrument, in the cases of uterine rising. This appeared feasible, but practically it failed from mechanical difficulties encountered in the workshop.

How do we know the instrument is doing well? Answer—by the relief, more or less complete, to the neurotic symptoms that have tormented the patient. Walking, riding, exercising, household and even professional duties, should be performed with more ease than before.

A late writer has alluded to the weight of the uterus being only a few drachms, and that the effect of lifting such a slight weight cannot avail much; that when it presses on the bladder this weight is too small to amount to any thing. Now, the fact of the light weight remaining, it is also a fact that frequent micturition, hyperæsthesia in hands, head, in stomach and elsewhere, have been relieved simply by replacing the uterus to its normal site with the sound or stem, so often, so consecutively and so positively, that the relation between cause and effect was too pronounced to be overlooked. I have seen in cases, thus maintaining the uterus in position, a restoration of the active duties of life and development of the bust, form and carriage, from being flattened, bent forward and drooping, to full bust, deep chest and upright trunk.

It has seemed as if a load that had been drawing the woman down towards the earth had been lifted off. Indeed, the clear, bright, flashing eye, the easy, quick and graceful movements, the spirited countenance, the poise, the stamina, have shown a wonderful change from the drooping eyes and form, the slow, moping and uncertain carriage, from the premature sitting down in quiet with folded hands, like a grandmother, from tho immobile face and form, the giving out from exhaustion by a little exercise, labor or employment. Women have been called lazy, hypochondriac, nervous, with an idea significantly conveyed, if not expressed in so many words, that this condition was something that they could help. Had the same women broken their thighs not a word would have been said when they ask for professional aid; but when they suffer from uterine troubles, which, when unrecognized and untreated, are worse in their effects on the system than a broken thigh — for they cause neuroses more acute than the pain of fractures — is it reasonable to chide them for asking for assistance then?

Diet.—The best diet for a case, which is not rigid absolutely, is one mouthful of vegetable food to two of animal food.

Baths of ammonia and warm water; sponge all over at night; drink hot water, one pint one hour before each meal and on retiring.

Comparative Value of the Porcelain and Hard Rubber Stem.—Have the expectations been realized? Not fully so far. As a general rule, though there has been a cessation in the amount of vaginal discharge, in some cases there has seemed to be no difference. Some patients have thought that the feeling of slight heat was removed by the change of pessaries. One said that the hard rubber stem relieved the head, but not the back, but that the porcelain stem caused both headache and backache to cease. One patient who could not wear the hard rubber stem now wears the porcelain stem without any trouble whatever, and calls it her "little china doll." She is engaged in the active practice of teaching, which I am quite sure she could not do were it not for the stem pessary. In this case there was a complication of consumption. This combination is a formidable one, making the cure more worthy of note. She complained not of pain, but of prostration, more or less complete, after exercise which ought not to have tired, but exhilerated her, were she well. This case also presented vaginismus and uterismus, relieved by iodoform gelatine vaginal capsules, thirty grains twice a week at least. In a fortnight the anteversion was relieved by a sound, and a stem was introduced.

Here I cannot speak too higly of iodoform. It is the best nerve sedative known, and it can be used without fear of harm in quantities of thirty grains at a time. It heals; it has no local chemical action; it has no bad after effects like opium; it does not constipate nor disturb the liver or appetite. Its smell is its greatest objection, but by the free use of absorbent cotton and a drop of oil of citronella (made from a grass citronelle that grows in Ceylon, not used in medicine, but employed in the arts of the hair dressers), as suggested by Dr. Philip Leidy, of Philadelphia, the smell can be obviated to a great extent. I think those that use tobacco and discard iodoform are not consistent nor wise, for tobacco is disgusting to many and a poison, while iodoform is one of the most valuable contributions of modern chemistry to medicine, and ought to be held in the highest esteem by women as a positive drug of remarkable healing powers. If the odious smell of tobacco is no bar to its use by so many millions as an æsthetic, the softer but more persistent odor of iodoform ought to be no bar to its use as a drug. Tobacco, smoked, acts as an emetic on me, but iodoform soothes with the soft ease of assafœtida. The capsules administered are the 1-32 ounce vaginal, made by Planten & Son, and others. It is a good plan to order them filled by the apothecary, who will find a gold pen reversed the best shovel, and who should not allow the iodoform to be spilled on the outside of capsules. The patient can introduce them herself, and thus save the time and trouble of the physician. When there is vaginismus, the physician had better apply the capsules, and he will find them an improvement over the mode by the speculum, which, to a virgin vagina, hyperæsthetic and contracted down to the size of one's forefinger, is barbarous, without anæsthesia. If the capsules are dipped into water they will enter with more facility. If simply introduced dry, sometimes the capsule will stick tight, as if glued to the mucous membrane, and it will cause pain to move it, and sometimes the capsules will be torn and their sharp edges lacerate the vagina, for it must be remembered that the most natural thing for the vagina, when hyperæsthetic, is to contract on to any foreign body and cause the most exquisite pain. But the capsule when wet will slip in so quickly and smoothly that it is fully introduced before the vagina has time to contract. Care should be taken not to wet the capsule too long before use, as it will then have such elastic walls that the pushing finger will penetrate its substance like a hernia. If the wall of the capsule is rigid, there will be no trouble.

Care of a Stem Pessary.—For the first few days care should be taken that there is no tenderness, that the rising of the womb is met with another instrument, that the tension of the suspensory cord is maintained, not too loose and not too tight, that the patient learns how to manage during defecation. This is done by loosening the belt before sitting on the water closet, holding with one had in front the pessary just above the joint, and then turning the outside segment forward with the other hand, and thus held with the first hand, use the the instrument during defecation. When the function is concluded, hold as before the pessary firmly, turning the outside segment, and the symmetrical feel of the instrument will indicate when it is rightly placed, and then tighten the belt. During baths the instrument should be kept in, but the belt can be replaced with a tape around the waist, as the wet webbing would be uncomfortable, if not dangerous. Never introduce a stem at office; always do it at the domicile. The patient had better be so situated that she can keep still. It is well, sometimes indispensable, to have all clothing removed save the night clothes. The clothing should be suspended from the shoulders, chemiloons. It is folly to try to keep a womb in place when the corsets and clothes press down from above. If the patient feels any trouble, let her lie down and keep still till it is passed away. Should there be chills, fever, unusual soreness upon touching the abdomen or pessary, the patient may remove the instrument and try again.

The physician should examine the vagina and see if the uterus rests down on the disc, if the vagina is not hot and dry, or tender on pressure. When the vagina is cool and moist let the stem remain. See that the uterus does not swallow the disc; if so, remove it; it will not answer for the stem to impinge on the fundus. Apply tannin capsules, iodoform capsules and intra-uterine iodoform pencils. This intra-uterine treatment should precede the stem if the inside of the womb is tender. I rely on the iodoform to relieve subinvolution or enlargement.

A stem pessary ought not to be worn when the uterine cavity is over three inches in depth, as the womb may bend over the end of the stem and cause trouble. If the rectum is hyperæsthetic, use the iodoform capsules. If the bladder is hyperæsthetic, examine for stone and for cryptogamian vegetations in the bladder. Never try to hold up a uterus connected with a tumor, or abscess, or stricture. If there are adhesions of the uterus, they should be broken up. A stem may be used when there are lateral versions and flexions. Always make a diagnostic exploration with the uterine sound, and move with care, for fear of mistakes.

MEDICAL EDUCATION.*

BY REGENT WILLIAM H. WATSON, A.M., M.D., UTICA, N. Y.

[REPORTED FOR ALBANY MEDICAL ANNALS BY H. M. PAINE, M.D., ALBANY.]

[A cursory examination of the present status of medical affairs shows: (1) That the medical profession in this country is greatly overcrowded, not by well educated physicians, but by illiterate ones; and (2) that the acquirement of medical honors can be obtained by ignorant persons from second- and third-class medical colleges far too easily.

An examination into the causes which have contributed to the production of this unsatisfactory condition of affairs is perennial, and the inauguration of measures with the view of checking the steady influx of unqualified practitioners is frequently attempted.

That an effectual remedy can never proceed from the colleges is plain to every unprejudiced observer; hence it is equally evident that a radical improvement must emanate from the ranks of the profession at large.

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*Abstract of paper and discussion on final day of the University Convocation, in the Capitol at Albany, Thursday, July 9, 1885.

At the inception of every movement for correcting some of the more glaring abuses the way is found to be hedged by almost insurmountable obstacles. How to bring about needed reforms without interfering with the rights, privileges and prosperity of the better class of medical colleges on one hand, and, at the same time, promote the advancement of public interests on the other, has puzzled the wisest and ablest members of the medical profession.

Obviously the accomplishment of the greatest degree of success seems to lie in the direction of the elevation of the standard of requirements, both prior to attendance upon medical lectures and also after graduation and before admission to practice.

The establishment of open and uniform tests by others than the colleges themselves must be substituted for the secret and often untrustworthy standards erected by inferior medical institutions. This is a reform which must be done under the auspices and supervision of state authority, there being no other source whence adequate and impartial assistance can be expected.

The following admirably prepared paper, presented by Regent Watson, at the recent University Convocation, will be read with interest by all who are endeavoring to promote the practical elucidation of these important questions.—H. M. P.]

That it is of the utmost importance, both to the public and to the profession itself, that the medical profession should maintain a high standard of education, will not, I think, be disputed by any educated man. So intimate are the relations of his profession to all grades of society, and so closely is it intertwined with every kind of interest, not only of the individual man, but also of the aggregated masses of mankind, that the best interests of society are advanced by its prosperity, and nothing which affects its well-being can be devoid of interest to the community.

No man lives for himself alone, and the advantages of knowledge can never be confined to their immediate possessors. If this is true of men in general, with how much greater force is it applicable to the physician. Every hamlet has its physician, who is brought into daily and most familiar intercourse with every individual, as well as with every family, in it. As the calling of the physician brings him into more intimate and direct contact with all classes and conditions of men than the members of any other profession, and under circumstances which render his influence most powerful for good or evil, so do the attainments of physicians make their power felt, while their deficiencies are noticed throughout a whole community more completely than those of any other profession. If we are to consider physicians merely as men engaged in the common avocations of life, their education, therefore, should not and could not properly be a matter of indifference to the communities in which they live.

The standard of medical education is confessedly so low, both in the abstract and in comparison with the other learned professions, that there has arisen, both within and without the profession, an urgent demand for a more thorough preparation than now exists in this state or country. The degree of Doctor of Medicine now possesses little value as a certificate of proper qualification for the duties of the profession, for the reason that there is no standard of qualification, except that which each of the one hundred and twenty-three medical colleges in the United States (twelve of which are in our own state) may choose to adopt. In only about sixty per cent. of these is there any examination required preliminary of the study of medicine, and in most of the cases, where any examination is required it is of the most elementary kind.

How is the evil to be remedied?

1. By a better preliminary training of candidates for the profession.

2. By separating the teaching from the licensing interests.

No extended argument can be necessary to prove to the educators whom I have the honor of addressing the importance of preliminary training of the mind to ensure the greatest efficiency to the medical profession.

In an address which I had the honor of delivering in this city on February 28, 1861, I urged upon the profession that every physician should understand Latin, moral, intellectual and natural philosophy, chemistry, the mathematics and all the English branches, and stated that it was very desirable for him to superadd to these a knowledge of French and German, and also expressed the desire that the study of medicine should be extended through four years instead of three. During the quarter of a century which has elapsed since that time, I have had abundant opportunity to see the importance of the preliminary education then suggested.

I would here enter another plea for the study of languages by the medical student, and especially of the Latin and Greek. I confine my remarks chiefly to these two, because they are, to a great extent, the parents of most of the modern languages, and we derive from their study the same benefits, though in a far greater degree, than from the study of any of the modern languages, unless I except the German. The study of the classics, while on the one hand eminently conducive to the habit of disciplined thought, involves, from its very commencement to its close, the nicest analysis, the most delicate perception of different shades of meaning and the most constant collocation of words. By such processes as these the mind acquires not only the ability to recognize the slightest varieties in thought and speech, but the power which to the physician is worth more than any other, since upon it depend all his subsequent procedures in the treatment of disease — *the facility akin to a quick and unerring instinct* — of differentiating similar cases of disease — in a word, the power of *diagnosis*.

No argument can be necessary to prove the importance of a knowledge of chemistry, physics and the English branches. We come then to the question of the importance of a preliminary study of the mathematics. Every one who has studied the pure mathematics in a thorough and systematic manner must certainly acknowledge that their influence in disciplining his mental powers is by no means small. The study of geometry and algebra, when pursued in such a manner that all the relations between the different processes are thoroughly understood, gives to the mind a habit of attention and of strict analysis, and secures to it a power of tracing the relations between causes and their effects that can be attained to an equal extent by the pursuit of no other branch of education. The mind accustoms itself to a nice and accurate observation of the distinct and subordinate parts which make up the whole subject, as well as to an exact view of the manner in which they all harmoniously conspire towards the same end. The power thus acquired by a series of efforts in one department of inquiry is employed with admirable effect in other pursuits.

2. There must be an entire separation of the teaching from the licensing interest.

Beyond all question, the intent of the laws now in force in this state relative to the medical profession is to maintain such a grade of qualification as shall ensure the attainment of that sound medical education which is essential to all physicians.

That they fail in accomplishing their purpose cannot be denied. The reason of this failure is very obvious. The state, in the case of the medical practitioner, waives its own just and proper prerogative of deciding upon the qualifications of those who are to have the charge of the lives and health of its citizens, and accepting the degrees conferred by the medical colleges as sufficient guarantees of those qualifications constitutes them licenses to practice. Having decreed that certain specified branches of study must be pursued, that three years must be given to their acquisition, and that the candidates must then be examined in these studies before he can receive a degree of license to practice, the state then leaves the fulfillment of these conditions to be determined by those who are pecuniarily interested in granting the candidate his diploma, with all the advantages accruing to its possessor.

It should be the prerogative of the state to determine the educational qualifications of those who are to care for the lives and health of its citizens, and it certainly should not allow the teachers of a candidate to give him a license to practice. If the state interposes to protect the lives and health of its soldiers and sailors, do not other citizens deserve a like service at its hands?

[The speaker then discussed the laws in other countries governing the licensing of physicians.]

What, then, should constitute the proper conditions of medical licensure in the state of New York?

We answer—

1. A fairly liberal preliminary education.
2. Four years of professional study.
3. Examination and license by an impartial court appointed by the state.

Is such a plan as that we have outlined feasible? We believe it is. The necessary provisions are fully embodied in the admirable law passed May 16, 1872, chapter 764 of the Revised Statutes, save only that the law is optional with the student and not compulsory. The object of its originators was to establish a higher or honorary degree for the medical profession, of which only those persons who were really qualified and meritorious could avail themselves. As its possession would be a guaranty to the public that the physician who had obtained it was not only a *diplomatized*, but also a *really qualified*, practitioner of medicine, it was hoped that the desire to possess it would furnish an incentive to the ambition of medical students, and would thus powerfully contribute to a higher standard of education among the members of the medical profession. The plan of examinations, as provided by the law and arranged by the Regents of the University, was such that collusion, laxity or partiality was impossible. Before becoming a candidate for the degree he was compelled, however, to prove that he had honestly studied medicine for three years, and to adduce proofs which would be satisfactory to the chancellor of the university of the possession of "a competent knowledge of all the branches of learning taught in the common schools of the state, and of the Latin language." In order to pass the examination he was compelled to prove himself the possessor of a better preliminary preparation and of more medical learning than had ever before been required to obtain the degree of Doctor of Medicine in this state. Under the law the examiners themselves were on trial. Their questions and opinions were placed on record, and the examinations were open to the public. This law, however, failed to effect the purpose for which it was intended. The reason of this failure is very plain. It was not compulsory. Its requirements were rigid, and collusion, laxity and partiality were impossible. It was, therefore, *far easier* for a candidate to obtain a degree (which is substantially a license to practice) from one of the medical colleges than to undergo the examination. This fully accounts for the very small number of applicants under that excellent law. A single paragraph of law, however, would, by making the law of 1872 *compulsory*, correct it into a system as efficient as the German *Staats Examen*, which, in the judgment of the speaker, is by far the most efficient system in the world. We firmly believe, therefore, that some modification of this law, made compulsory, will, at no distant date, revolutionize the system of medical education in this state, for the following reasons:

First. It cannot, if made compulsory, fail to accomplish the object which all educated men so much desire—the elevation of the standard of medical education in this state.

Second. While it confers no special or peculiar privileges upon a class, yet the degree will be an assurance to the public of the qualifications of all who shall attain it, and will, therefore, be a legitimate passport to professional success.

Third. The provisions of such a law will not in any way conflict with the vested rights and privileges of the medical colleges. It will, however, furnish an inducement to them to increase the thoroughness of their instruction and to advance their standards of graduation, since in course of time, that institution would attain the highest reputation from which the largest number of graduates should have obtained this degree.

Finally. We believe that no other measure can be devised which would so powerfully tend to the advancement of sound, practical knowledge among the future members of the medical profession, while its liberal, impartial and catholic provisions would leave no reasonable room for objection, and would eventually commend it fully to the good sense of the people of the state.

REMARKS.

Following the reading of the foregoing paper remarks were made by several members present.

Dr. **Tremaine**, of Niagara University, maintained, in an extended argument, that a higher standard of preliminary qualifications prior to attendance upon medical lectures should be required by all medical colleges. He deprecated the laxity in this respect which has always existed, and which grows out of the desire, on the part of rival colleges, to interpose as few obstacles to the study of medicine as possible. The result is that many uneducated physicians are permitted to exercise functions and privileges which they are incompetent to perform, and showed, beyond doubt, that his statements were well founded, by calling attention to the fact that, although the question of sanity, in certain cases, requires the exercise of great skill and sound judgment, acquired by special study and training, yet two illiterate practitioners are clothed with the requisite legal authority, by the possession of the medical degree, to commit to perpetual incarceration in an insane asylum any member of any community in this state. And these same unqualified physicians are also, in many cases, the only persons authorized by law to control the use of the most active and dangerous poisons.

The methods for securing an entrance into the medical profession were also signally objectionable. The present laws authorize a most unrepublican plan, that of giving the medical colleges the right to license their own graduates to practice. The right to enter upon practice should be conferred only by state authority. The state now controls the appointment of engineers and even clerks in many of the offices of minor importance; why, then, should it not take in charge the licensing of graduates in medicine?

Dr. H. M. **Paine**, of Albany, strongly supported the position taken by the previous speaker. He urged the general adoption of a uniform grade of preliminary requirements by all medical colleges, the standard to be established by the Board of Regents. He also advocated an entire separation of the teaching from the licensing interests, and the taking of the latter in charge by the state, and expressed the hope that measures would be inaugurated for giving legal effect to the sound and practical suggestions so ably set forth by Regent Watson.

Dr. Murray, LL.D., Ph.D., Secretary of the Board of Regents, presented a summary of extracts from the reports of medical colleges to the Regents, showing the entire absence of any concerted action on the part of the twelve or thirteen medical institutions in this state for securing suitable preliminary educational qualifications prior to attendance upon medical lectures.

Rev. Dr. Fairburn, of Stephen's College, fully endorsed the sentiments of the previous speakers, and, in order to give practical effect to the measures proposed, moved the appointment of a committee to continue the consideration of the subject and report at the next convocation.

ABSTRACTA.

Cocaine produced opacity of the cornea after two or three days' use, in two cases.—*Dr. Wilson, Denver, Col., in Canadian Practitioner.*

Cholera inoculations in Spain are said to be a failure. It is suggested that Ferran is inoculating with septicæmia merely. The *Philadelphia Medical Times* says: "The fact that cholera is neither contagious nor self-protective, and that its pathogenic cause resides in the intestine and not in the blood, so far as has been ascertained, would seem effectually to forbid any hope that it is a disease from which immunity can be obtained by inoculation."

Klein holds that inasmuch as an examination *immediately* after death reveals no trace of the comma bacillus or other bacteria, not even in the superficially loosened epithelium, Koch's theory that the disease is caused by the comma-bacilli secreting a chemical poison must be erroneons. Klein asserts that while the comma-bacilli grow well in alkaline and neutral media, acids do not kill them. The comma-bacillus of the mouth shows the same peculiar characters of growth in gelatin as Koch's comma-bacillus. He also maintains that the comma-bacillus may be found not only in discharges from the intestines in other diseases than cholera, but also in the mouths of healthy persons. Recently, also, it has been found in some common articles of food, Deneke having discovered it in stale cheese.—*Medical Age.*

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D., A. VAN DER VEER, M.D., LORENZO HALE, M.D.,
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. AUGUST, 1885. NO. 8.

SOME THINGS TO BE OBSERVED IN THE READING OF PAPERS AND REPORT OF CASES.

Much annoyance might be avoided if the authors of papers and the reporters of clinical cases were more precise in their reference to dates and quotations from medical journals. For instance, one writer states that he operated "last week," not deeming it necessary to give the exact date, yet the case was an important one. Another quotes from a paper read at the meeting of the Jones County Medical Society and reported in the *Medical Record* of last week, forgetting the importance of stating the date and number of so well-regulated a journal. Another refers to a paper reported in the *New York Medical Journal* for 1884, such reference being almost useless to the busy practitioner until the index to the volume is published. To be sure, this journal gives a most complete index for each number, but when twenty-four or twenty-five of these journals have accumulated, it is not an easy task to look them over in search of an article thus vaguely referred to. Another, in the report of a case, states that he was consulted by letter September 1, but does not give the year, leaving one very much in doubt as to the length of time the patient had been under observation.

Our publishers should be somewhat careful, too, to preserve the uniformity of their publications, the varying size, in some cases where the length of the page has been increased to nearly twice that of the original, causing a serious sacrifice of shelf room to those who preserve bound files of the volumes. A. V.

MEDICAL NEWS.

THE OLD CODE.

The American Medical Association, at its meeting in New Orleans, in May, 1885, unanimously resolved that the following interpretations be added in all future publications of the Code:

1. *Resolved*, That clause first of Art. IV., in the National Code of Medical Ethics, is not to be interpreted as excluding from professional fellowship, on the ground of differences in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

2. *Resolved*, That it constitutes a voluntary disconnection or withdrawal from the medical profession proper to assume a name indicating to the public a sectarian or exclusive system of practice, or to belong to an association or party antagonistic to the general medical profession.

3. *Resolved*, That there is no provision in the National Code of Medical Ethics in anywise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations cannot be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code.

But no such emergencies or circumstances can make it necessary or proper to enter into formal professional consultation with those who have voluntarily disconnected themselves from the the regular medical profession, in the manner indicated by the preceding resolution.

THE AMERICAN INSTITUTE OF HOMŒOPATHY.

The last annual session closed June 5, at St. Louis. The following resolutions were given the unanimous endorsement of that body:

Whereas, The American (Allopathic) Medical Association recently adopted a so-called "interpretation" of the "consultation clause" of their code of ethics; and

Whereas, Said interpretation contains statements and implications calculated to mislead the public, therefore the American Institute of Homœopathy deems it proper to place on record the following statement:

1. The interpretation claims that "no article or clause in the (Allopathic) code of ethics interferes with the most perfect liberty of individual opinion and practice;" yet clause 1 of article IV. explicitly forbids consultation with physicians who employ a certain mode of "practice" or "whose practice is based upon" a certain kind of "dogma" or "opinion."

2. The interpretation declares that the (Allopathic) code "does not interdict, *under any circumstances*, the rendering of professional services whenever there is pressing need of them;" yet the same paragraph declares that "*no circumstances can* make it proper to enter into professional consultation with physicians" of a certain class or kind.

3. The interpretation insinuates that Homœopathic physicians have "voluntarily disconnected themselves" from the mass of the medical profession by "assuming a title indicating an exclusive or sectarian system of practice." The fact is that the disconnection of Homœopathists from Allopathic societies, in the first place, was enforced, and not voluntary, and this, in many cases, before any special title had been assumed. Moreover, Allopathists have themselves assumed an exclusive and sectarian title—that of "regular"—and this, not to enlighten the public in regard to their mode of practice, but largely to cast an implied imputation upon the professional character and status of other physicians.

4. The interpretation intimates that the physicians ostracised by the Allopathic school "belong to a party antagonistic to the general medical profession." We reply that the antagonism between the schools began with the Allopathic efforts to ostracise, calumniate and otherwise persecute physicians holding different opinions, and to this day the antagonism has, on our part, been limited to measures for self-defense.

THE INTERNATIONAL MEDICAL CONGRESS.

The thirty-eight members added at New Orleans, May, 1885, to the original committee of seven named by the American Medical Association in Washington, 1884, to provide for the 1887 meeting of the International Medical Congress, called a meeting in Chicago June 24, although the original committee had issued a call for a meeting in September. Twenty-five of the added members and two of the original committee responded.

The work of this meeting was to undo the year's work of the original committee. The nineteen sections provided for were cut to sixteen. The thirty-four members which the first committee added to its own number were dropped *en masse;* although many of these were reappointed, care was taken to reject every man who was supposed to be of New Code politics, as it had been before decided that no Americans can be members of the International Congress unless in affiliation with the American Medical Association.

Immediately after this action of the committee was reported in Philadelphia a number of prominent men of that city, who had been appointed officers of the Congress, held a meeting, and in a series of resolutions "decline to hold any office whatever in connection with the said Congress as now proposed to be organized." Similar action has been taken in Boston and Baltimore.

LOCAL LAWS RELATING TO THE CITY WATER SUPPLY AND BOARD OF HEALTH.

CHAPTER 306.

AN ACT relating to the further supply of pure and wholesome water for the city of Albany and modifying and amending parts of chapter two hundred and seventy-six of the laws of eighteen hundred and eighty-four, entitled "An act in addition to and amendatory of the several acts relating to a supply of water in the city of Albany."

PASSED May 22, 1885; three fifths being present.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Samuel Hand, Archibald McClure, Albert Van der Veer and Owen Golden are hereby constituted and appointed a special water commission of the city of Albany, and are directed to make due inquiry as to the available sources of supply of pure and wholesome water for the city of Albany, and if the present water supply of said city be in their judgment the best available supply for said city, then as to what, if any, method can be adopted for the improvement of the character of the water now used, or the purification thereof, and for such purposes they are authorized to employ competent engineers, experts and other assistants, and to incur such other expenses as may be proper in the premises, provided that the entire amount of money to be so expended shall not exceed the sum of ten thousand dollars Any vacancy which may occur in said special water commission through death, resignation, or otherwise, shall be filled by the appointment of a successor by the remaining commissioners.

SEC. 2 Said special water commissioners shall, immediately after the taking effect of this act, meet and organize by the selection from their own number of a president and secretary, and shall, within six months from and after the time that this act shall take effect, make a report to the common council of the city of Albany of the results of their inquiries in the premises, which report shall be filed with the clerk of said common council. Said report shall explain as fully as practicable the plan proposed, and the estimated cost thereof, or shall state that said commissioners have no plan to propose. Said clerk shall, immediately upon the filing of such report with him, call a meeting of said common council for the consideration thereof; of which meeting at least five days' notice shall be given in the usual manner. If such report shall by resolution be approved by a majority of the members elected to said common council within one month after it shall be filed with the clerk of that body, then such resolution of the common council shall, before it takes effect and within five days after its passage, be sent to and left at the office of the mayor of the city of Albany, duly certified by the clerk of the common council, of the time of which act on his part said clerk shall make a record in a book kept by him for that purpose, and such clerk shall be guilty of a misdemeanor in case he willfully neglects for a period longer than during such five days to deliver such resolution at the mayor's office. If the mayor approves of such resolution he shall sign it and it shall take effect immediately, and it shall then be the duty of the special water commission to cause to be made full and exact plans and specifications of the work in and by said report recommended, and to advertise in the official city newspapers and such other newspapers and in such other manner as to said special water commission shall seem proper for a least three weeks for proposals for the doing thereof, and in such advertisement to state a definite time and place at which bids will be received, at which time and place said special water commission shall meet and publicly receive and open such bids and state the contents thereof. If the mayor does not approve of such resolution he shall return it with his objections, and file it, together with such objections, with the clerk of the common council within ten days after it was delivered at his office. The said clerk shall at the time fixed for the next regular meeting, and in the room where such meetings are authorized to be held, if there be a meeting of the common council at such time, read aloud said veto or objections and enter the same at length upon the journal of the board; and if there be no such meeting, then the clerk shall at such time and place announce the fact of such veto and enter the same upon the journal of the board and within three days after said objections are so entered, or such announcement made, shall cause such objections or veto to be published one time in the corporation newspapers. Unless three-fourths of all the members elected to the common council shall at the time designated for the first regular meeting after its publication (at which a meeting shall be held) vote to pass said resolution notwithstanding the objections of the mayor, it shall not take effect; if said three-fourths shall so vote therefor, it shall take effect as if signed by the mayor. In every case the vote shall be taken by ayes and noes and be entered on the journal, and if such resolution shall not be returned by the mayor within ten days after it has been delivered at his office as hereinbefore provided for, it shall take effect in like manner as if he had signed it; provided, however, that if the mayor or the clerk of the common council shall within such ten days certify in writing to the board that owing to the sickness or absence from the city of the mayor he has been unable to duly consider such resolution, then the time within which such resolution may be vetoed by the mayor shall be extended for ten days more.

Said special water commission may accept any bid or bids then made and enter into proper contract or contracts with such bidders for the doing of the work, or may again advertise for new bids and enter into contracts under such new bids; provided, however, that no contract shall be made for the whole or any part of any work the cost of the entire and complete execution of which, including all incidental damages and liabilities connected therewith, shall exceed one million and two hundred thousand dollars. Such bonds shall be required of the contractors for such work as in the judgment of said special water commission shall be proper. Said special water commission is authorized to employ a proper person to superintend the said work and such assistants as may in its judgment be necessary, and to make any other expenditures necessary and proper in the supervision and prosecution thereof. And said works when fully completed shall be surrendered and possession thereof shall be given to the board of water commissioners of said city, who shall thereafter have the same jurisdiction and control over the same as over the present existing water-works of said city.

Sec. 3. All expenses incurred under the provisions of this act shall be paid by the chamberlain of the city of Albany upon the presentation of the bills therefor accompanied by the warrant of the special water commission stating the name of the claimant and the amount of the claim, and directing the payment thereof, which warrant shall be signed by the secretary of the commission, and when it shall direct the payment of more than two hundred and fifty dollars, shall be also countersigned by the president thereof. The money required to meet and pay said warrants shall be the extent of the expenditure for the inquiry and investigation to be made as to a new available water supply, or the improvement or purification of the present supply of said city, be paid out of the moneys in the chamberlain's hands collected from the city water-rates; the money to be paid for the erection or building of any new work or works intended to improve the character of or purify the present water supply shall be provided by the issuing of bonds of the city of Albany, in the manner and form hereinafter more particularly described and provided for, which bonds shall be issued under requisitions upon the common council of said city to be signed by the members of the said special water commission, or of a majority thereof, and it shall be the duty of the said common council, whenever such requisition shall from time to time be made upon it under the provisions of this act, to cause the said bonds to be issued, provided that the total amount thereof shall not exceed the sum of one million and two hundred thousand dollars.

SEC. 4. All questions and matters arising before such special water commission shall be decided by the majority of the members thereof, except that the report to the common council above mentioned shall not be made or acted upon in any manner by said common council, or be deemed or considered a report under the provisions or within the meaning and intent of this act, unless the same shall be signed and approved by at least three-fourths of the said special water commissioners. Written minutes shall be kept of the proceedings taken and action had at the meetings of said special water commission, and the votes upon all questions involving or directing an expenditure of money shall be taken by ayes and noes, which shall be entered, with the names of those voting, in said minutes, and shall not be valid unless so taken.

SEC. 5. Except as hereinafter provided the board of water commissioners of the city of Albany are forbidden to take any proceeding under, or to take any steps to carry into effect, the provisions of an act entitled "An act in addition to and amendatory of the several acts relating to a supply of water in the city of Albany," passed May twelve, eighteen hundred and eighty four, and known as chapter two hundred and seventy-six of the laws of eighteen hundred and eighty four. The special water commission hereby created may at any time within the limitations of this act make a partial report with recommendations. Upon such report and upon its approval by the common council, and by the mayor of the city of Albany, such action may be taken by the present water commissioners of the city of Albany, either as provided for and authorized by this act, or by chapter two hundred and seventy-six of the laws of eighteen hundred and eighty-four, the title of which chapter is mentioned in this section, in conformity with such partial report and recommendations of said special water commission, but not otherwise.

SEC. 6. If no report shall be made to said common council within said six months by said special water commission, or if the report made shall not recommend any new or different source of supply of water for the city of Albany, or shall recommend a method of improving the character of or purifying the present water supply of said city, or if any report shall not be approved by the common council and mayor as above stated, then the said board of water commissioners of said city shall proceed to carry out the provisions of said chapter two hundred and seventy-six of the laws of eighteen hundred and eighty-four; provided, however, that the requisition for the issue of bonds heretofore made upon the common council by the board of water commissioners under said act, chapter two hundred and seventy-six of the laws of eighteen hundred and eighty-four, shall be of no validity or effect, but said board of water commissioners, subject to the stay and suspension of action on its part imposed by the preceding provisions of this act, is authorized and empowered to hereafter make from time to time requisitions upon the common council of the city of Albany for the issue of bonds specified in said act of eighteen hundred and eighty four, or of so many of them as may from time to time be required to raise money to make such payments as may be necessary and proper under said act of eighteen hundred and eighty-four, and the common council shall from time to time cause the bonds for which such requisitions shall be made to be issued.

SEC. 7. All loans contracted or made by the issuing of bonds under the provisions of this act, or under the said act, chapter two hundred and seventy-six of the laws of eighteen hundred and eighty-four, shall bear interest at the rate of four per cent. per annum, payable semiannually, and be sold, after ten days' public notice in the city newspapers of the time and place of sale thereof, for not less than par. They shall be so made payable that five per cent. of the principal of the entire loan shall be and become due on the first day of February after the issuing of the first requisition. The bonds issued under the first requisition shall be those first to fall due, and in like manner under each subsequent requisition.

It shall be the duty of the board of water commissioners of the city of Albany to so fix and regulate the charges for water therein as to collect sufficient money to meet and pay at maturity the bonds issued under the provisions of this act or the said act of eighteen hundred and eighty-four, in addition to the amount which it shall be necessary to raise to pay any bonds falling due of the existing water debt. The scale of water rates established by said board of water commissioners shall be general and uniform, and shall be annually reported in detail in the report of said board to the common council, which said report shall also contain a full statement of all moneys collected by water-rates, whether general or special, and of the disposition thereof, and a balance sheet showihg the receipts and disbursements of the funds, and the present condition thereof, and in detail the investments or cash, if any, held therefor.

Sec. 8. If it shall, in the judgment of the special water commission, become necessary, for the purpose of carrying out the provisions of this act, to acquire the title to any land or to condemn or pay for any rights, easements or other property, and the special water commission shall not be able to agree with the owners thereof as to the compensation to be paid therefor, or such owners shall be unknown, the said special water commission shall have the right to acquire the title to, and the use of, the same, by proceedings conducted in the name of the city of Albany, under and pursuant to the provisions of the act entitled "An act to authorize the formation of railroad companies, and to regulate the same," passed April second, eighteen hundred and fifty, and the several acts amendatory thereof. All property acquired or taken under the provisions of this act shall be taken and acquired in the name of the city of Albany, and shall be owned by said city of Albany.

Sec. 9. Said board of water commissioners is hereby directed to purchase duplicate parts of such portions of the present pumping engines as are most liable to accident or injury.

Sec. 10. This act shall take effect immediately.

Chapter 297.

AN ACT for the preservation of the public health and the registration of vital statistics in the city of Albany.

Passed May 21, 1885; three-fifths being present.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. It shall be the duty of the common council of the city of Albany, upon the nomination of the mayor of said city, to appoint a board of health for such city, to consist of six persons who are not members of said council (one of whom, at least, shall be a competent physician), who shall be nominated and appointed as follows: Two persons for a term of one year; two persons for a term of two years, and two persons for a term of three years. The mayor of such city shall be a member ex-officio of such board of health, and shall be president thereof. The said board of health when duly organized, shall appoint a competent physician (not a member of such board), who shall be health officer for such city. Upon the expiration of the term of office of any member of the board of health appointed as herein provided, his successor shall be nominated and appointed in like manner for the term of three years; and the said mayor and common council shall also have power to fill any vacancy caused in such board of health by the death, resignation or removal from the city of any member thereof. This section shall not be construed to remove the existing board of health in said city, but the successors of such board shall be appointed as in this section provided.

SEC. 2. The said board of health as now organized and hereafter to be organized in said city shall have power and it shall be its duty:

1. To meet at least monthly.

2. To prescribe the powers and duties of the local health officer to be appointed by them, and to direct him from time to time in the performance of his duties, and to fix the compensation he shall receive.

3. To guard against the introduction of contagious and infectious disease, by the exercise of proper and vigilant medical inspection and control of all persons and things arriving in said city from infected places, or which, for any cause are liable to communicate contagion; to require the isolation of all persons and things infected with or exposed to contagious or infectious diseases, and to provide suitable places for the reception of the same; to prohibit and prevent all intercourse and communication with or use of infected premises, places and things; and to require, and, if necessary, to provide the means for the thorough purification and cleansing of the same before general intercourse therewith, or use thereof, shall be allowed. To provide at stated intervals a suitable supply of vaccine virus; and during the existence of an actual epidemic of small-pox said local board of health shall obtain fresh supplies of said virus at intervals not exceeding one week, and shall at all times provide thorough and safe vaccination for all persons within its jurisdiction who may need the same.

4. To receive and examine into the nature of complaints made by any of the inhabitants concerning nuisances, or causes of danger or injury to life or health within the limits of its jurisdcition; to enter upon or within any place or premises where nuisances or conditions dangerous to life and health are known or believed to exist, and by appointed members or persons to inspect and examine the same; and all owners, agents and occupants shall permit such sanitary examinations; and said board of health shall furnish said owners, agents and occupants a written statement of results or conclusions of such examinations; and said board of health shall have power, and it shall be its duty, to order the suppression and removal of nuisances and conditions detrimental to life and health found to exist within the limits of its jurisdiction.

5. To supervise and make complete the filing and registration of all births, marriages and deaths occurring within the limits of its jurisdiction in accordonce with the methods and forms to be prescribed by it. Said board of health shall designate the persons who shall grant burial permits for the burial of the dead, and transit permits for the transportion of the dead bodies of persons who are to be carried for burial beyond the limits of the county where the death occurs. And the said board of health shall prescribe sanitary regulations for burials and removals of the dead. Any person neglecting or refusing to make out or file for registration any record as aforesaid, or as provided for by the ordinances of said board of health, and any person causing, permitting or assisting in the burial or removal of any dead body, unaccompanied by a permit for such burial or removal, and any officer who shall neglect or refuse to register and preserve the said records shall be deemed guilty of a misdemeanor, and may be prosecuted in any court of competent jurisdiction.

6. To make, and from time to time publish, in such manner as to secure early and full publicity thereto, all such orders and regulations as they shall think necessary and proper for the preservation of life and health, and the successful operation of this law; and to make, without publication thereof, such orders and regulations in special or individual cases, not of

general application, as they may see fit concerning the suppression and removal of nuisances, and concerning all other matters in their judgment detrimental to public health, and to serve copies thereof upon any occupant or occupants and the owner or owners of any premises whereon any such nuisances or other matters aforesaid shall exist, or to post the same in some conspicuous place on such premises.

7. To apply, through its health officer or any authorized committee, for warrants to any magistrate or police justice in said city to apprehend and remove such persons as cannot otherwise be subjected to the orders and regulations by them adopted; all which warrants shall be forthwith executed by the officers to whom they shall be directed, who shall possess the like powers and be subject to the like duties in the execution thereof, as if the same had been duly issued out of any court of record in this state.

8. To employ all such persons as shall be necessary to enable them to carry into effect the orders and regulations they shall have adopted and the powers vested in them by this act, and to fix their compensation.

9. To impose penalties for the violation of, or non compliance with, their orders and regulations, and to maintain actions in any court of competent jurisdiction to collect such penalties, not exceeding one hundred dollars in any one case, or to restrain by injunction such violations, or otherwise to enforce such orders and regulations.

Sec. 3. Every person who shall willfully violate or refuse to obey any order or regulation made and published by said board of health of said city or served or posted as by this act provided shall be guilty of a misdemeanor, and, on conviction thereof, shall be fined or imprisoned, or both fined and imprisoned, in the discretion of the court, such fine not to exceed one thousand dollars and such imprisonment not to exceed six months. In case any order or regulation made by the board of health shall have been duly served upon the occupant or owner or any one of several occupants, or owners of any premises, or if there be no occupant in actual possession, or the land be vacant and the owner be unknown and cannot be found, such order or regulation shall have been duly posted in some conspicuous place upon said premises, and the said order or regulation shall not be complied with within the time in said order or regulation specified for compliance therewith, the said board of health, its officers, servants, agents and employees are authorized to enter into and upon the premises to which the said order or regulation applies and suppress, remove or otherwise abate the nuisance or other matter or thing mentioned in said order or regulation, which in the judgment of said board, is detrimental to the public health, and any other nuisance, matter or thing found in or upon said premises, which, in the judgment of said board, is detrimental to the public health, and to incur all expense proper, suitable and necessary for such purpose. Such expense so incurred shall be assessed, fixed and determined by said board of health in each case, and may be recovered by said board in an action brought in the name of the city of Albany against the owner or any one or more of the owners of the premises upon or in relation to which such expense was incurred. The said board of health may, at any time before the expiration of one month from the time that such expense has been incurred and the work of suppression, removal or abatement has been fully completed, file, in the Albany county clerk's office, a notice, which shall be recorded in the book therein containing notices of pendency of action in said office and entered in the indices of such notices. Said notice shall state that a claim, specifying the amount thereof, exists in favor of the city of Albany against the owner (specifying his name if known) of the premises therein described and also against the premises therein described, that such claim arose because of work done or materials furnished, or both, at a time, or between certain times in said notice to be specified, and pursuant to an order or regulation of the board of health of the city of Albany. The said notice shall be subscribed by the secretary or president of said board. The amount in said notice shall be and constitute a first lien upon the premises therein described, and may be collected in an action brought in the name of the city of Albany for the foreclosure of said lien and the sale of the premises in said notice described, conducted in all respects in accordance with the rules and practice of the supreme court in an action for the foreclosure of a mortgage, provided that no action shall be maintained for the foreclosure of such lien unless it be brought within six months after the filing of said notice. The proof of service of the order or regulation of the board of health may be made in the same manner as proof of service of a summons in the supreme court.

Sec. 4. All expenses incurred by the said board of health in the execution and performance of the duties imposed by this act shall be a charge on said city, and shall be audited, levied, collected and paid in the same manner as other city charges are audited, levied, collected and paid.

Sec. 5. Chapter one hundred and fifty-two of the laws of eighteen hundred and forty-seven, chapter three hundred and twenty-four of the laws of eighteen hundred and fifty, and the several acts amendatory thereof, and supplementary thereto, shall not apply to the city of Albany.

REPORT ON THE CHEMICAL EXAMINATION OF THE WATERS OF THE PUBLIC WELLS OF ALBANY.

Chemical Laboratory, Albany Medical College,
Albany, N. Y., *July* 14, 1885.

To the Honorable A. Bleecker Banks, President of the Board of Health, Albany, N. Y.:

Sir—Agreeably to the instructions of the chairman of the Sanitary Committee, and in conformity with a resolution adopted by the Board of Health on the 29th of May last, I herewith present my report on the chemical examination of the waters of the public wells of this city. A list of thirty nine (39) such wells was furnished to me, and these have all been visited and samples of water obtained and analyzed from thirty-six (36) of the same. The pump on the corner of Washington avenue and Dove street was found to have have had its handle removed, and from the wells situated on Broadway at the corner of Erie street, and on Delaware street, west of Elizabeth street, no water could at any time be obtained. I am informed by the Street Commissioner that the first named of these has been ordered closed, and that no immediate repairs will be made to the two others.

Most of these wells, as I am informed, have existed for a number of years, and it was found impossible to obtain much information concerning any of them. They are believed to average about forty feet in depth, though some of them are said to be much deeper, and to be curbed either with stone or brick. This curbing is probably never impervious to water, and hence the possibility doubtless exists of these wells receiving water from the surface or near the surface of the ground, and sewage from broken drains and sewers or the leachings from cesspools and privies.

The nature of the soil in which these wells are sunk varies according to their location and depth. Clay is the prevailing sub-stratum, and this is generally overlaid by loam and sand. Surface water penetrates through the sandy soil and oozes out at its junction with the clay, and therefore wells which are dug in the clay become, in effect, reservoirs receiving the water which percolates through the pervious soil from above. Below the clay, which varies in thickness, is a stratum of pervious gravel containing water in quantity depending upon the thickness of the gravel and the contour of the rock below, and some of the best wells in the city are said to have their source in this gravel. Indeed, a committee of the Albany Institute, of which Professor James Hall was chairman, in a report to that body on the water supply of Albany, made in 1872, stated that a very large quantity of water might be obtained by sinking a large and deep well into this gravel at some favorable point and pumping the water therefrom into a reservoir for distribution. I have been unable to learn, however, which, if any, of the city wells at present existing penetrate into and draw their supply from this stratum, but should there be any such it would still be possible, unless they were curbed with exceeding care and very favorably situated, for them to receive the influx of sewage percolating through the sandy soil above or flowing perhaps for a considerable distance over the comparatively impervious clay beneath the sand and above the underlying gravel.

Concerning the purity of well-waters very mistaken notions prevail. In sparsely settled neighborhoods, or under exceptional circumstances, wells may yield water of very great organic purity, but shallow wells, situated, as too frequently is the case, in the vicinity of dwellings, stables and barnyards, privy vaults, cesspools, or other receptacles or imperfect conduits for sewage and excrementitious matter, may become grossly polluted. Even deep wells, unless very carefully guarded, are liable to the same kind of pollution; and, indeed, it will frequently be impossible to protect even such wells therefrom, for impure water may percolate through the soil to great depths and distances, as has been abundantly proved in many instances. Such waters are generally clear and colorless, recommending themselves on account of their freedom from odor and unpleasant taste; but it must be remembered that these sensible properties of a water throw but little light upon its real quality, for a water may be bright and sparkling to the eye and pleasant to the taste, though loaded with products resulting from the decay of animal matter, and possibly containing germs capable of giving rise to infectious diseases, even after prolonged filtration through the soil. Such filtration, though it results in the removal of suspended impurities, has little effect upon the dissolved constituents and apparently none at all upon such specific germs as may be present. The well-known case at Lausen, Switzerland, furnishes conclusive evidence upon this point. In August, 1872, an outbreak of typhoid fever occurred at Lausen, in the canton of Basel. The public water supply was from a spring rising at the foot of the Stockhalden, and so received and conveyed to Lausen that pollution at its source or on the way was impossible. Suspicion attached to this water, for it was found that households employing other water were exempt from the disease; and on investigation it was found that cases of typhoid fever had occurred in a farmhouse situated in a valley on the other side of the Stockhalden, and that the drainage from the farm went into a brook, a part of which lost itself in the mountain, after traveling through which for about a mile it reappeared in the spring which formed the Lausen supply. Large quantities of salt were thrown into the stream and the salt detected soon after in the Lausen supply, thus proving the connection between the two, though when several hundred weight of flour were thrown into the stream not a trace of it could be detected, showing how thorough a filtration the water received in passing through the mountain. This case was most elaborately investigated, and is of the greatest interest, in showing that the most efficient percolation is insufficient to remove the poison of typhoid fever from contaminated water.

To speak of disease germs is, as will be readily understood, to use a term which has as yet little precise significance, for the real existence even of such germs is, in the case of most infectious diseases, as yet not absolutely proven. Nevertheless, little exception can be taken to the phrase employed, since the facts in the case abundantly bear out the theory that many communicable diseases are conveyed by minute organisms, so minute perhaps as to be forever unrecognizable, like the sporules of some well-known plants, which organisms are thrown off with the excretions of persons suffering with these diseases, and are, in certain instances, capable of being conveyed to great distances by water, retaining their vitality and power of communicating these diseases to others. Indeed, it seems highly probable that certain diseases, like typhoid fever and cholera, are seldom communicated in any other way. The recent outbreak of typhoid fever at Plymouth, Pennsylvania, has shown that the dejections of a single typhoid fever patient in all probability poisoned the water supply of the town, and gave rise to an extended epidemic of the disease, and there is little doubt that the germs of cholera are most frequently conveyed by water used for drinking.

The necessity is therefore apparent of distinguishing between harmless, or at most unpleasant and *possibly* unwholesome, filth and that which contains specific, disease-producing material. All filth and filth-products are to be avoided as far as possible, but all are by no means equally harmful. In the present state of science the chemist cannot distinguish between these two classes, and a water may, chemically speaking, be pure and yet contain sufficient morbific material to give rise to disease; and, conversely, a water may be loaded with impurities and yet prove harmless when used for drinking. It by no means follows, however, that a chemical analysis is valueless in determining the hygienic quality of a water, for since any water which contains the recognizable products resulting from the decay of animal matter is liable to become specifically polluted and to disseminate disease, the use of such waters should be discouraged, even though they may apparently, for a time at least, be not unwholesome. A well may receive the leachings of a privy vault for years and its water be drunk with impunity, but in the event of the privy receiving the dejections of a single typhoid fever or cholera patient, this same water may communicate the disease to many others who use it. Wells which receive sewage matter, therefore, may become at any time foci for disseminating disease, and ought not to be employed. Fortunately the chemist can generally recognize such pollution. Polluted well waters, as already stated, may be apparently pure, and they are generally clear and cool and palatable, even when containing large quantities of organic matter and the products of its decomposition, while, on the other hand, surface waters may be turbid and muddy, disagreeable to the taste and to the smell, and yet be far safer to employ. The sensible properties of a water afford little indication of its real quality, a statement which is repeated, the more strongly to emphasize it.

From what has been said, therefore, it will appear that city wells, or those situated in thickly settled suburban districts, are exceedingly likely to become polluted or specifically contaminated, and that such wells may become at any time important factors in disseminating disease. The prejudice in their favor is based on ignorant suppositions concerning the purity of ground waters, and we find that as more intelligent views concerning them come to be held such wells are being rapidly abandoned. The Brooklyn well-waters, for instance, were analyzed last year by Dr. Bartley, chemist to the health department of that city, and on his recommendation out of a total of 655 wells then existing 547 were closed and 92 condemned, and on August 27, 1884, but seven wells were allowed to remain. Even the artesian wells in New York city, sunk in some cases to considerable depths, have been frequently found to furnish exceedingly impure and evidently defiled water, and many of these have been ordered closed by the board of health of that city.

Various methods are employed in the making of sanitary analyses of potable waters. A complete mineral analysis is seldom required, and the methods of procedure now in use are, to a certain extent, arbitrary, since the chemist is unable to isolate the real morbific material which water may contain, and can only in a general way detect the organic matter or the compounds resulting from its decomposition, and can never assert with certainty that such matter is of necessity harmful. If, however, a water is found to contain such matter, and especially that which is rich in nitrogen, in undue quantity, the chemist is generally justified in condemning its use as being probably or possibly disease producing. It is, of course, impossible to obtain *pure* water, but evidently that which is obviously defiled ought not to be employed. The chief methods of water analysis now in use are Frankland and Armstrong's combustion process, Tidy's permanganate method, or some modification thereof, and Wanklyn and Chapman's ammonia process. The latter has been very largely employed in this country and Great Britain, and, though criticised by advocates of other methods, is generally regarded by water analysts as affording very valuable indications. Without describing the process in detail, it may be said that it consists in the distillation of a certain quantity of the water and the determination of the total amount of ammonia contained in the successive distillates, and denominated "free ammonia," and the subsequent distillation of the water remaining with an alkaline solution of permanganate of potash, by which treatment albumenoid substances existing in the water are decomposed and ammonia liberated, the amount of which is determined and denominated "albumenoid ammonia." "The principle of the method is the measurement of the nitrogenous organic matter by the quantities of ammonia yielded by the destruction of the organic matter," and, other things being equal, those waters which contain most putrescible or readily decomposable organic matter will yield most free ammonia, and waters contaminated by animal matter more of both free and albumenoid ammonia than those which contain matter of vegetable origin. Evidently such a procedure throws little light upon the real nature and absolute amounts of the organic matter present, but there is no method of chemical analysis at present known which can afford this information.

In connection with Wanklyn's method, the chlorine, total solid residue, loss occurring on ignition of the same, and mineral matter have been determined in each instance. Chlorine, which occurs in potable waters chiefly as chloride of sodium, is, of course, harmless in itself, if the quantity is not excessive; but since such waters are, when uncontaminated, almost invariably quite free from chlorides, while, on the other hand, all animal excrementitious matters and sewage are rich in chlorine, we naturally infer that waters containing this element in any quantity are contaminated by sewage. In the following analyses the amounts of chlorine have been determined volumetrically with a solution of nitrate of silver, using chromate of potash as an indicator, in the usual manner, and it will be observed that these amounts are in many instances exceedingly large, and clearly indicate pollution. The "total solid residue," or amount of solid matter remaining on the evaporation of the water, the loss on ignition ("organic and volatile"), being the loss attendant upon the incineration of the total solids at a dull-red heat, and the "mineral matter," determined by subtracting the weight lost on ignition from the weight of the total solids, throw some light on the quality of the water, though not very much importance is now attached to the results so obtained. It was formerly supposed that the loss on ignition, or "organic and volatile matter," as it is also termed, indicated quite accurately, after certain corrections had been made, the amount of organic matter existing in the water, but as the loss of weight which results not only from the decomposition of carbonates, but of nitrates and nitrites and other inorganic constituents, as well, cannot be estimated with precision, we are unable with any degree of accuracy to determine the amount of organic matter present by such a procedure. These determinations have, however, been made, since they are not without value when taken in connection with the other analytical results. The color and appearance of the water and its odor at 100° F. have also, in all cases, been noted.

In coming to a conclusion as to the quality of a water from the results obtained on an analysis of the same, there will, of course, be room for some difference of opinion. We have no absolute standards for our guidance, and can only employ those which experience has demonstrated to be generally valuable. Concerning chlorine, Frankland is of the opinion that in waters containing more than 5 parts in 100,000 (= 2.92 grains per gallon) sewage is to be suspected, while if the amount is under one part (= 0.58 grains per gallon) the water "may with great probability be declared free from sewage." As regards free and albumenoid ammonia, Wanklyn concludes that those waters which contain less than 0.05 parts per million of albumenoid ammonia are very pure; those which contain 0.05 to 0.10 parts are dirty, while over 0.15 parts per million "ought to condemn a water absolutely." When the free ammonia exceeds 0.08 parts per million he considers it as proceeding almost invariably from "the fermentation of urea into carbonate of ammonia," and to be "a sign that the water in question consists of diluted urine in a very recent condition." Such waters generally contain chlorine in excess. On the other hand he concludes that much albumenoid ammonia, little free ammonia and an almost entire absence of chlorides is indicative of vegetable rather than of animal contamination. It will be observed that certain of the waters here reported on contain enormous amounts of free ammonia, equal in some cases to the quantities existing in some samples of sewage. Beyond a doubt such ammonia has resulted from pollution with organic matter of animal origin. The amounts of albumenoid ammonia, though in a few instances large, are not generally excessive, a fact frequently observed in the examination of well-waters.

In forming an opinion as to the quality of the waters examined, while regard has been paid to the standards proposed by Frankland, Wanklyn and others, all the facts obtainable have been considered and the analytical results studied with care in connection therewith; and if some of the conclusions seem, from a mere study of the figures, to have been arbitrarily formed, they have, nevertheless, been arrived at only after a careful weighing of all the facts in each case. A water is classed as "good" when of satisfactory purity; as "fair" when the probabilities are that it may safely be employed; as "doubtful" when the results point to probable pollution, and the use of the water can be by no means recommended, and as "bad" when the water is beyond question unfit for consumption. It will be seen that there are classed as good, 3; fair, 5; doubtful, 13; bad, 15; total, 36.

I recommend that those wells the waters of which are classed as "bad" be closed at once, and I am decidedly of the opinion that it would be the safest course to close those also which are classed as "doubtful." Those which are classed as "good" and "fair" ought to be re-examined at some future time, and if no material change in their character is found to have occurred they may be allowed to remain for the present.

The analytical results will be found appended in full. These are expressed in grains per U. S. gallon of 231 cubic inches, or 58.372 grains, with the exception of the ammonia determinations, which are given in parts per million, as usually stated.

Very respectfully submitted,
WILLIS G. TUCKER.

ANALYSES OF THE WATERS OF THE PUBLIC WELLS OF ALBANY.

No.	Location.	Date of Taking Sample.	Color and Appearance.	Odor at 100 deg. Fahr.	Chlorine, grains per gallon.	Free Ammonia, parts per million.	Albumenoid ammonia, p'ts per million.	Total solid residue, grs. per U. S. gal.	Loss on ignition, grains per U. S. gal.	Mineral matter, grains per U. S. gallon.	Conclusions.	No.
1	Wash. ave. bet. Swan and Dove....	June 15	Clear, colorless.	None.	7.24	0.0066	0.0400	57.20	21.60	35.60	Doubtful.	1
2	Grand st. cor Madison ave	“	Milky, decided sediment.	Slight.	7.70	0.0540	0.0700	31.52	5.25	26.27	“	2
3	Monroe st. bet. Chapel and Cross..	June 17	Clear, colorless,	None.	3.09	0.1340	0.0400	19.26	3.50	15.76	“	3
4	Hawk st. cor. Canal................	“	Clear, colorless.	“	3.85	0.1460	0.3000	35.61	12.84	22.77	“	4
5	North Pearl cor. Colonie	“	Milky, decided sediment.	Slight.	1.81	0.0660	0.0500	36.77	13.42	23.35	“	5
6	North Pearl cor Van Woert	“	Milky, slight sediment.	None.	11.32	0.2140	0.0600	68.88	28.02	40.86	Bad.	6
7	Madison ave. cor. Dove............	June 18	Clear, colorless.	“	10.51	0.0134	0.0300	51.37	18.68	32.69	Doubtful.	7
8	Elm bet. Swan and Dove...........	“	Clear, colorless.	Very slight.	19.85	0.0400	0.0700	99.82	38.53	61.29	Bad.	8
9	Jefferson bet. Swan and Dove	“	Bluish tint.	Very disagreeable.	6.30	3.7000	0.4700	36.77	10.50	26.27	“	9
10	Spring bet. Cortland place and Quail	June 19	Clear, colorless.	None.	1.40	0.0670	0.0150	21.01	8.75	12.26	Fair.	10
11	Lexington ave. cor. Central ave....	“	Muddy, yellowish sediment.	Earthy.	2.10	5.8700	0.5000	18.68	7.59	11.09	Bad.	11
12	Schuyler cor. Franklin.............	June 20	Clear, colorless.	Unpleasant.	11.85	4.2700	0.0800	67.71	19.26	48.45	“	12
13	Bassett cor. South Pearl...........	“	“ “	“	7.06	2.9100	0.0200	46.11	16.34	29.77	“	13
14	Fourth ave. cor. South Pearl.......	“	“ “	None.	1.34	0.0530	0.0350	35.02	12.26	22.76	Fair.	14
15	Elizabeth cor. Fourth ave..........	“	Slightly milky with slight sediment.	“	0.99	0.1600	0.0300	21.60	6.42	15.18	Doubtful.	15
16	Alexander cor. Clinton	“	Slightly milky, slight sediment.	“	1.17	0.0660	0.0300	31.52	11.09	20.43	Fair.	16
17	McCarthy ave. west of Cherry Hill.	June 23	Colorless and slight sediment.	Slight.	0.88	0.1670	0.1500	17.51	8.17	9.34	Bad.	17
18	North Pearl cor. Mohawk..........	June 24	Clear, colorless.	None.	2.80	0.0066	0.0110	38.53	20.43	18.10	Good.	18
19	Albany west of North Pearl........	“	“ “	“	1.93	0.0107	0.0150	36.77	22.18	14.59	“	19
20	Emmet st. cor. North Pearl........	“	“ “	Slight.	5.84	0.0400	0.0260	43.78	19.26	24.52	Doubtful.	20
21	Emmet st. west of North Pearl.....	“	“ “	None.	1.75	0.0270	0.0250	35.61	19.85	15.76	Good.	21
22	Livingston ave. bet. Swan and Lark	June 25	“ “	“	9.92	1.4700	0.0400	72.96	27.43	45.53	Bad.	22
23	Third st. bet, Swan and Lark	“	Colorless, slight sediment.	“	9.81	0.0200	0.0250	85.81	31.52	54.29	Doubtful.	23
24	First st. bet. Swan and Lark.......	“	“ “ “	“	8.29	0.0130	0.0130	87.55	36.77	50.78	“	24
25	Second st. bet. Hall place and Swan	“	Clear, colorless.	“	5.49	5.8700	0.0350	48.45	17.51	30.94	Bad.	25
26	Lawrence bet. B'way and Montg'y.	“	Slightly milky, slight sediment.	Slight.	10.10	0.8000	0.0300	44.94	9.92	35.02	“	26
27	Livingston ave. cor. Jackson.......	“	Milky, yellowish sediment.	“	5.02	0.6700	0.1100	33.27	9.92	23.35	“	27
28	Livingston ave. cor. Broadway	“	Clear, colorless.	None.	5.08	0.0200	0.0350	31.52	9.34	22.18	Doubtful.	28
29	Orange bet. B'way and Montgomery	“	“ “	Slight.	15.06	0.0670	0.0130	74.13	26.27	47.86	Bad.	29
30	Yates st. bet. Lex. ave. & Robin st.	June 26	“ “	“	7.12	0.0130	0.0700	74.71	32.10	42.61	Doubtful.	30
31	Tivoli st. west of North Pearl......	June 27	“ “	None.	6.86	0.0107	0.0150	60.12	19.26	40.86	Fair.	31
32	Albany st. cor. Broadway..........	“	“ “	Slight.	9.19	1.8660	0.0680	72.38	30.94	41.44	Bad.	32
33	Third st. cor. Ontario..............	“	Cloudy, slight sediment.	“	11.97	0.0160	0.0430	67.13	26.27	40.86	Doubtful.	33
34	Central ave. bet. Robin and Perry.	June 30	Bluish, opalescent.	Very unpleasant.	6.01	0.6700	0.1100	40.28	12.26	28.02	Bad.	34
35	Schuyler cor. Clinton	“	Clear, colorless.	None.	2.63	0.0330	0.0280	25.10	7.59	17.51	Fair.	35
36	Wash. ave. bet. Dove and Lark sts.	July 7.	Turbid, greenish tint, slight sediment	Slight.	5.66	1.6670	0.1100	44.36	11.67	32.69	Bad.	36

ALBANY

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SOME PERSONAL OBSERVATIONS ON THE WORK OF LAWSON TAIT, TOGETHER WITH REPORT OF FIVE CASES OF ABDOMINAL SECTION BY THE WRITER.*

BY A. VAN DER VEER, M.D.,
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I am free to confess that seldom have I had so strong and favorable an impression made upon me by any stranger as I received in meeting Mr. Lawson Tait at his private hospital in Birmingham, England.

A short conversation convinced me of being in the presence of an original thinker, and later, when the opportunity to see him operate was given, there was ample proof presented of his being a careful, cautious, great surgeon.

His book on "Diseases of the Ovaries" I had read and studied with so much benefit that I was somewhat prepared to grasp the hand of a practical worker, but in no sense did I fully understand the acuteness of his investigations, the ingenious methods of operating he possesses, and the far-reaching scope of his present work.

His hospital is a model of all that one could wish regarding quietness, cleanliness, and perfect system, not only in nursing, but in every thing. This discipline is the outgrowth of years of hard work and close application, and yet Mr. Tait is scarcely forty years of age.

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*Read before the Medical Society of the County of Albany, Wednesday evening, January 28, 1885. Published also in The American Journal of Obstetrics and Diseases of Women and Children, New York, July, 1885.

He has described quite fully in his book the necessary preparations incident to an operation, and yet to witness all is a study. Every thing is arranged by the nurses after being told of the nature of the operation and the hour of operating.

He selects young, intelligent and prepossessing women, whom he trains for the work he so much enjoys, and they in their desire to learn and please become true enthusiasts in the struggle to save life. He will not have morose, untidy or homely women as nurses.

Mr. Tait enters the room, and almost at a glance tells whether all required instruments are selected. He brings his bag of carefully prepared sponges, and, counting them again, tells the assistant nurse their number, and she is held responsible for them. So also in regard to the number of forceps and other instruments.

The following is his method of preparing the sponges, and but one person is trusted to do this:

New sponges are first put into a large quantity of water, with sufficient muriatic acid to make the water taste disagreeably acid.

They remain in this mixture until all effervesence has ceased and all the chalk is removed. For this purpose it may be necessary to renew the acid several times.

The sponges are afterwards carefully and thoroughly washed to make them as clean as possible and free from every rough particle.

After being used at an operation, they are first washed free from blood, and then put in a deep jar and covered with soda and water (one pound of soda to twelve sponges). They are left in this about twenty-four hours (or longer if the sponges are very dirty), and then they are washed perfectly free from every trace of soda.

This takes hours of hard work, using hot water, squeezing the sponges in and out of the water and changing the water constantly. Leaving them to soak for a few hours in very hot water greatly assists in the cleansing.

When quite clean, they are put into a jar of fresh water containing about one per cent. of carbolic acid, and after being in this for twenty-four hours they are squeezed dry and tied up in a white cotton bag, in which they are left hanging from the kitchen ceiling (being the driest place in the house) till they are wanted.

His hospital bears every evidence of good plumbing and careful ventilation. No extra furniture is allowed in any room. Rugs in place of carpets are used, except in the halls and on the stairs, where carpets with matting may be seen. The rooms, by reason of brick partition walls, are exceedingly quiet. There are beds for twenty-two patients, and they are kept constantly filled. (He is now building a large addition for greater accommodation.) Aside from true gynæcological work, he occasionally does other surgical operations, of which we shall speak later.

Rooms are thoroughly cleansed after each patient leaves, and no display is made of any particular antiseptic in so doing. Nurses and attendants go about with cheerful faces, but no noise. Mr. Tait himself, when going through the rooms visiting, makes but few remarks aside from what is required in dictating treatment, etc., and although a man who enjoys a well-told story and general conversation, indulges in no talk here. I was strongly impressed with the fact that his own dwelling-house adjoins his hospital and communicates with it, and when a case goes badly he is promptly on hand, trusting to no one else to right matters.

In his operations he has a lady physician to administer the anæsthetic (his preference he has already told us in a recently printed address), and one male assistant, whose position is directly opposite him, and yet who is seldom allowed to handle any of the sponges or instruments, only assisting when the abdominal walls are being opened and in ligating the pedicle, appendages, or adhesions, depending upon the nature of the operation and its complications.

He operates standing at the right side of his patient, and has his instruments and sponges on the same side within easy reach.

Patient is placed upon a narrow table, legs and arms fastened in the ordinary manner, but no rubber protective used.

Case I.—*Fibroid Tumor, Solid—Supra-Vaginal Hysterectomy—Recovery.* The first operation I saw him do July 8, 1884, was for the removal of a fibroid as large as a quart measure, and filling the cavity of the pelvis, but freely movable upwards. He did not make a very long incision considering the size of the tumor, and it is my belief that he prefers to get along with as short a cut as possible. I was struck with the easy manner in which he opened the abdominal walls, and by means of his modified Koeberle's scissors forceps controlled the hemorrhage and lifted up the layers of tissue, pausing only on reaching the sub-peritoneal tissue to see that all hemorrhage was thoroughly controlled, and then his free incision in the peritoneum was exceedingly neat.

The patient was a married lady, about forty years of age, who had suffered for nearly five years from severe hemorrhages. Mr. Tait at first intended to remove only the uterine appendages, but finding them adherent and closely attached to the tumor, he decided to do a supra-vaginal hysterectomy.

After the tumor was well exposed, he slipped over the fundus and about its neck his rope ecraseur, drawing it tightly, and it was then I saw an instance of the operator's originality, in that he took an ordinary corkscrew, large, heavy, and with broad flanges, and, screwing it tightly into the fibroid, lifted it outside the abdominal cavity with comparative ease, thus far having passed only two fingers into the cavity of the abdomen, as done at first to examine appendages and to arrange rope of ecraseur. He now placed about the neck of the tumor, or rather uterus, his wire clamp, and, when well secured, the rope was removed, and tumor cut away with scissors, scarcely any hemorrhage being observable.

The peritoneum and tissues were now, after Bantock's method, as stated by Mr. Tait, brought together by sutures, thus, in a measure, covering the stump amputated. Incision in abdomen was closed by interrupted sutures, the cavity of pelvis being sponged dry, feeling assured that no bleeding had occurred or was now going on from edges of the stump. Incision was dressed by simple Gamgee pads of absorbent cotton and gauze, held in position by adhesive plaster. The operation lasted nearly an hour, and the patient was put to bed with cans filled with hot water placed about her, reaction coming on promptly, She was soon conscious, with scarcely any vomiting following. Was allowed only warm water to sip, little being given for the first twenty-four hours.

In the beginning of this operation both Mr. Tait and his assistant were careful to wash their hands in pure water and soap, the instruments were in warm water, as also the sponges, with no other antiseptic precautions of any kind. Two nurses were given this patient exclusively, the temperature and pulse taken every six hours, and absolute rest afforded. In the hall on the door was the request to walk without making any noise. July 10th I saw this patient, and witnessed the dressing of the wound. It consisted simply in wiping away the secretions (no pus), and reapplying the pads and plaster. She had had after the operation a rectal suppository of opium; also three or four full doses morphine, in the meantime, by the mouth.

Temperature 38.7° C. (101.6° F.); pulse 88. Had had several rectal injections of turpentine, and passed flatus quite freely. No distention of abdomen. Had a good expression of face, and was assured by Mr. Tait that she would surely recover. Passed urine freely; catheter not used.

I saw this patient a number of times during the following two weeks. The clamp and slough came away on the eighth day; very little discharge of pus from the wound at any time, it being dressed with Syme's red wash, pledgets of absorbent cotton wet, and these changed quite frequently.

This wash consists of sulph. zinc., gr. iij.; comp. tr. cinch., ℥i.

She made a good recovery. Her worst time was the second night, when pain in the abdomen grew very severe, and Mr. Tait ordered promptly two hypodermic injections of morphine of one-half grain each, giving relief and the necessary rest.

Case II.—*Uterine Myoma—Removal of Uterine Appendages—Recovery.* Mrs. P., aged 40. Married. Had a uterine myoma about the size of a cricket ball. Suffered from severe and repeated hemorrhages. July 9th Mr. Tait, by short incisions, using first and second fingers of the left hand to draw them out, removed entire uterine appendages, ligating them by his Staffordshire knot. Very little sponging of the pelvic cavity was required. Some embarrassment in getting hold of appendages by reason of the omentum being in the way. Mr. Tait does not hesitate to place small and the large flat sponges freely in the abdominal cavity as needed to keep the contents back from incision and out of the way. Chloroform was given this patient. She made a good recovery in ten days, but there were two or three stitch-hole abscesses which healed kindly under the use of the red wash. She was kept exceedingly quiet, as are all his patients.

Case III.—*Removal of Uterine Appendages for Excessive Hemorrhage due to Myoma—Recovery*, Mrs. B., aged 47. Tumor nicely filled cavity of the pelvis, but was freely movable. Ether given. Short incision; little bleeding; no adhesions. Ovaries easily reached; tubes ligated at about the middle portion by Tait knot. Four sponges in abdominal cavity, and more to keep intestines back. Wound closed with five sutures, long needle to carry suture silk. Operation lasted from six to ten minutes. In this case Mr. Tait emphasized the simplicity of the procedure, the grave nature of the ailment, the certain death toward which the patient was tending under any and all forms of medicinal treatment, and the almost positive cure that would probably result. Patient did not have an untoward symptom, and made a good recovery.

Case IV.—*Malignant Papillomatous Growth, Left Broad Ligament—Abdominal Section—Closure—Recovery.* Mr. Tait is one of the attending surgeons or gynecologists at the Woman's Hospital, Birmingham. With him I visited the institution July 11th. The patient was Mrs. A., aged 50, in the diagnosis of whose case Mr. Tait was in great doubt. He said that in such cases he did not hesitate to open the abdominal cavity and explore. Accordingly, he proceeded to make an abdominal section, patient having taken ether, and found on examination that she had a malignant papillomatous growth from the left broad ligament with a small parovarian tumor from the right side, which he tapped, but did not remove. He also removed through incision a large amount of ascitic fluid, and then closed the wound. Patient recovered, but Mr. Tait thought she would die in two or three months.

Case V.—*Hemato-salpinx—Recovery*—Mrs. E. K., aged 30. Married two years. No children. Menses began at the age of eighteen. Was very ill just before. Menstruated every five weeks, and did go as long as three months. Always suffered great pain at such times. Pain mostly in left side and back. Had been under physicians' care most of the time up to her marriage. December 25, 1883, her physician thought she had suffered a miscarriage at two months. She did not think so, having the same old pain and nothing different, but she continued to flow for nine weeks, and then ceased for only a short time; then it increased and grew worse during stated days, never entirely ceasing up to the day of the operation, she being in great pain most of the time. Could not be on her feet, and able to walk but little. March, 1884, was in bed three weeks; April, two weeks, and in May and June a good share of the time. Mr. Tait saw her July 1, and, after getting history, believed it to be a case of hemato-salpinx, and advised an immediate operation for removal of uterine appendages. To this she consented, and entered his private hospital.

I had an opportunity to examine the patient with Mr. Tait just before he began the operation, and could make out a well-defined tumor to the left of the uterus in Douglas' cul-de-sac. Chloroform was given. Same incision. Few adhesions. Right ovary and tube apparently normal. Left tube much enlarged, and, on lifting it up from the attachments, the sac ruptured, and the contents escaped into the peritoneal cavity. The incision was enlarged, the tube tied close to the uterus, and with ovary removed, and the cavity then thoroughly washed out with *plain* tepid water by means of a siphon. Drainage tube was placed in lower end of the incision after the pelvic cavity was well sponged, and the incision closed in the ordinary way. It was interesting to observe the clots of blood that the washing out process brought away, and which Mr. Tait asserted it would be almost impossible to sponge out. The drainage tube was cleaned every three hours by the suction of a bulb syringe with long tube. It was left in only about thirty-six hours, and, no longer filling, was removed. The temperature did not rise above 99.5°, the pulse above 88.

I saw her almost daily. On the sixth day all stitches were removed by the nurse; complete union. On the 23d she was practically well. Passed urine with some pain, but no catheter used. On the 21st she had slight pain in side, which Mr. Tait said would surely come on occasionally, and especially now, as it was about the day for her regular period.

This case would have died soon from exhaustion, or, had the cyst ruptured, from acute peritonitis. I can only say that to me the operation was a novel and interesting one.

CASE VI.—*Pyo-salpinx—Second Operation—Removal of Tube and Ovary.* July 13th Mr. Tait removed the left tube and ovary for pyo-salpinx from a young married lady upon whom he had operated two and a half months previous for removal of uterine appendages on the right side for the same condition. Soon after first operation she began to have pain in left, and would not wait longer for a second operation, having received so much benefit from the first. Incision was made directly in old cicatrix. This patient had for years suffered great pain in right side for two or three days before the flow began. Did not learn result.

Mr. Tait regretted he did not remove both tubes in first operation, but his rule always is to leave, if there be one, the healthy tube and ovary. Says he has had occasion several times to open the same abdomen a second time, and does it in the line of the old incision, and has always secured good union.

CASE VII.—*Abdominal Section — Sarcoma — Incision Closed — Recovery.* July 14th, Woman's Hospital. Mrs. C., aged 42. Twice married. One child by first husband, now eighteen. Tumor from left side, and rapid in growth. Some doubt as to diagnosis. Abdominal section made, and tumor found not to come from uterus, but to be a sarcoma from cavity of the pelvis. Very large vessels on its surface and running into it. Tumor underneath peritoneum. Declined to operate for its removal, as in such cases death from immediate hemorrhage is very probable. He had operated recently in a similar case on a lady from California, who died in twelve hours after, from bleeding that it seemed impossible to control. Incision was closed, and wound healed kindly.

CASE VIII.—*Abdominal Section—Cancer—Incision Closed—Recovery.* July 18, Woman's Hospital. Mrs. ——, aged 26. Married. No children. Had suffered much for over a year. Abdominal section for exploration. Found a case of soft cancer confined to the cavity of the pelvis, implicating nearly all the organs there. Nothing done. Incision closed. Patient doing well on sixth day, when stitches were removed. A few stitch-hole abscesses.

CASE IX.—*Double Hemato-Salpinx—Removal of Uterine Appendages—Recovery.* July 21, 10 A. M. Miss B., aged about 36. Ten years before had been under his care for two or three years for uterine trouble, when he tried every thing without doing her much good, and, patient growing tired, ceased to come. She tried many other physicians without any benefit, and then entered the Woman's Department of the General Hospital for two years, with no good resulting. Money now gone. She returned to Mr. Tait, who resolved to make an abdominal section and see what there was there. I assisted in the operation, and the case was found to be a double hemato-salpinx. Entire uterine appendages removed. Short incision. Wound closed in ordinary manner, and on the seventh day this patient was really well. Mr. Tait was greatly pleased over this case, and felt sure that recovery would be free from all suffering. All previous treatment by pessaries, etc., had been of more harm than good. Operation alone will do good.

CASE X.—*Ovarian Cyst—Recovery.* July 21, 5½ P. M. Miss E., aged 24. Two years' history of ovarian tumor from left side. Never tapped. Short incision. One slight adhesion. No vessel tied. Long pedicle secured by Tait knot and returned. Entire operation lasted about twenty minutes. Good and rapid recovery, although patient was more nervous after operation than any other case I observed in his hospital.

CASE XI.—*Ovarian Tumor—Recovery.* July 22, Mrs. ——, aged 56. Ovarian tumor of about three years' duration. No tapping, but in that time tumor had ruptured two or three times. No evidence of peritonitis either time. Ordinary operation in every respect. No adhesions. Good pedicle. Recovery.

Case XII.—*Hydro-Salpinx—Removal of Uterine Appendages. Recovery.* Miss ——, aged 20, had suffered much pain the past two or three years, also severe flowing. Abdominal section. Hydro-salpinx; both tubes and ovaries removed. Myoma in fundus uteri, but not disturbed. In the right one of the appendages were observed well-defined calcareous deposits, which Mr. T. always finds have been previously associated with much pain. This patient recovered rapidly.

Case XIII.—*Tubal Pregnancy—Abdominal Section—Recovery.* July 23, Woman's Hospital. Mrs. D., aged 30; has one child. Began to menstruate at 16, and has always suffered pain, which grew worse after the birth of her child. For the past two years the pain has been severe and constant. During the preceding two months was not sure whether she had menstruated normally or not. For the last week, and within a few days, the pain had markedly increased in right side. Mr. Tait, thinking it might be a case of pyo-salpinx, made abdominal section. Very much trouble was experienced in getting through the peritoneum. The walls of the abdomen were fat, and the tissues very loose. On reaching the right tube he found cyst had ruptured, that there were a number of clots in the pelvic cavity, and, after a little search, discovered, by feeling head of fœtus, that it was a case of tubal pregnancy. This, together with ovary and tube toward uterus, was removed; then the left tube, which was much distended and presented all the appearance of pyo-salpynx, with ovary, was also removed. Abdominal and pelvic cavity was then thoroughly washed out with tepid water by means of a siphon, many well-organized clots being found. The wound was closed in the usual way, and drainage tube placed in lower portion. Fœtus showed that she was near the end of her third month of pregnancy.

Mr. Tait has since told me that this patient made a good recovery. Can one imagine a more practical and successful method of treating such a case?

Case XIV.—*Intestinal Obstruction—Abdominal Section—Death.* Second patient for the day. Mrs. M., aged 57, married. Three years before, for severe uterine hemorrhage, due to a large myoma, Mr. Tait had removed the appendages, the patient recovering her full health and remaining perfectly well up to within four days previous to date, when, after a tiresome day's work, the patient suffered pain in abdomen and began to vomit, and later experienced all the symptoms of obstruction of the bowels. She could not be relieved by her physician, Dr. Hollywoods, and this morning (Wednesday), after fæcal vomiting had commenced, she was sent to the the hospital. Abdominal section was made through old scar, the union being so perfect that it did not seem to differ from the ordinary incision. Peritoneum reached without any trouble. No adhesions to stump on either side of the uterus. Myoma about the size of an average orange and very low down in the pelvis. Not much distention of abdomen. On careful examination the point of obstruction could not be found. Mr. Tait now believed the case to be peritonitis only. No effusion of lymph, but considerable serum escaped from abdominal wound. He decided to do what he had seen result in the recovery of the patient in a similar case, and proceeded to open the ileum at its most prominent fold, as it appeared in the incision. Through this, on introducing a large rubber drainage tube (suggestion made by Miss Annie E. Clark, M.D.), there escaped a great quantity of gas and much fluid, the abdomen becoming flattened at once. The intestine was drawn down and kept well outside the wound, and during the evacuation of the contents of the bowels nothing was allowed to escape into the peritoneal cavity. The wound was next closed in the ordinary manner, including the end of the incised bowel, with the peritoneum to edges of incision, a free opening in the bowel having been made, in which the drainage tube rested. No glass tube in lower end of abdominal section. Patient reacted from ether and appeared very much relieved and better that day. Mr. Tait has since informed me that she died from apparent exhaustion on the second day.

This is the method he adopts and would recommend in all cases of intestinal obstruction where it is impossible to locate the constriction. Would advise operating early, and before the patient is too much exhausted.

Case XV.—*Soft Myoma—Unsuccessful Attempt at Removal of the Uterine Appendages.* Third case for the day. Private hospital. Mrs. K., aged 30. Has suffered pains in the pelvis for years; for the past three most of her time has been spent in bed—almost a confirmed invalid. Has a large, soft myoma, from which there is not such excessive hemorrhage; but, in order to bring about her menopause and stop suffering, Mr. Tait had advised the removal of the appendages. Patient stated she feared he would find more trouble than he expected. Abdominal section was made, but tumor so covered by peritoneum that it was very difficult reaching the tubes. Only a section without the ovary was taken from left side. This Mr. T. had seen bring about the desired result and stop menstruation. Could not find right; enlarged the abdominal incision, and then, bringing tissues under observation, was so much in doubt between the intestine and enlarged Fallopian tube that he decided to go no further, and to close the wound, which was done in the usual way. Though the tissues were much handled and torn somewhat, yet he thought this case not much more than ordinary section. Many sponges were at times passed into the abdominal cavity. Dr. Miss Clark, who had examined the patient, thought the pain came mostly from the right enlarged tube. The nurses were instructed not to tell the patient her true condition. This Mr. Tait always prefers doing after the patient has recovered from the abdominal section. The patient recovered.

Mr. Tait says he has great trouble in treating these soft myomas, and it is among them his unsuccessful results have occurred. In this case it was impossible to do a hysterectomy, as is often the condition, nor can enucleation be practiced.

In addition to the cases just reported, I saw Mr. Tait in his own hospital explore the abdominal cavity of a young man of

20, suffering from sarcoma of the mesentery. First thought it might be a cystic kidney, but excluded this after using trocar of the aspirator. Patient died about nine hours after, although he was cheerful, coming out from the ether nicely, passing urine, and apparently doing well. Mr. Tait is not fond of using the aspirator, and thinks in this case it had as much to do with patient's death as had the abdominal section.

I also saw him operate for closure of fistula from gall duct, the remains of a previous cholecystotomy done nearly a year before. Unsuccessful, escape of bile forcing the wound open on the second day. Said he should try it again, as the fæcal evacuations showed plenty of bile. Female, aged 60.

He also operated for removal of female breast. Schirrus. Mrs. ——, aged 35. In this case he showed the same dexterity and rapid method of operating as in his abdominal sections. Closed the wound, or rather brought the flaps together, by means of the continuous suture, using rubber drainage tube full length of incision, applying Gamgee pads with adhesive plaster. No attempt at the use of antiseptics. This patient did well, getting nearly primary union.

These cases Mr. Tait regards as his most unfortunate and unpleasant ones, as the disease is almost sure to return in one or two years.

Some of his private cases impress one greatly. I saw a young lady upon whom he had done an ovariotomy only four days before, reading her novel with the greatest composure possible.

An old lady, aged 64, a case of ovariotomy, with many adhesions, going home on the fourteenth day well.

He prefers to operate upon vascular tumors of the meatus by means of the thermo-cautery.

There are, of course, special cases, but in every instance the whole tone of his hospital is to give the patients the greatest amount of encouragement and get them well as fast as possible.

At the Woman's Hospital I saw him operate for closing an old rupture of the perineum by his peculiar method. Says his cases have always done well. In the operation he use only crooked scissors, curved needles with handles, and silver wire. Operation very short and quickly performed.

Mr. Tait does not give much time to the examination of his patients as a general thing. His manner shows him to have unbounded confidence in making the abdominal section, and then treating whatever he may find.

He is an exceedingly rapid but safe operator. If he had never given us any thing more than the Staffordshire knot, he would ever command the respect and consideration of our entire profession. I believe the manner in which he prepares his sponges has very much to do with his success.

In continuation of this paper, I wish to present the record of cases occurring in my own practice, and mostly at the Albany Hospital, since my return in September, partly from notes taken by Dr. Babcock, assistant house physician, and medical student Larkins.

Case I.—*Ovarian Cyst—Recovery.* I first saw this patient in the early part of April, 1884, at the house of another patient whom I was visiting. Mrs. W——. Family history good. Aged 32. Married. Residence, East Worcester, U. S. Presented herself at the hospital as a private patient May 7, 1884, at which time she was tapped. Her feet and legs were much swollen, and, while examination of the urine revealed the kidneys as being healthy, yet, to complete the diagnosis, it was thought best to tap.

The tumor had been troubling her for some three and a half years, having increased rapidly in size the first six months, and after that more slowly. Says she thinks the enlargement began in the left side low down.

On May 7, 1884, a trocar was introduced, and thirty pints of a dark, syrupy fluid were withdrawn. Patient suffered but little shock from operation, and said that she had not felt so easy for three years. Pulse was accelerated, but there was no rise of temperature. She left the hospital May 14, feeling greatly relieved.

October 15, 1884, she again presented herself, and this time for an operation by removal of the cyst.

The room was thoroughly prepared by walls and floor being washed with soap and water, new bedding placed upon the bed, and then what little furniture there was, together with the walls, thoroughly carbolized by means of the carbolic spray. The room was large, and contained an extra bed for the nurse. Patient received a bath on the morning of the operation, and her bowels were thoroughly moved by means of an enema. The operation began 12:20 P. M., October 16, and occupied forty-five minutes. I was assisted by Drs. Snow, Boyd, Ward and Townsend. Four other persons, two being medical students, were present, thus making ten in the room. The tumor, with contents weighed thirty-six pounds, and came from the left ovary. The pedicle was of fair length, tied by Tait's knot, cut short, and dropped back into the peritoneal cavity. On examination the right ovary was found diseased and enlarged, and was removed in the same manner. There were no adhesions, and, although the patient had had quite severe pains on returning home after the first and only tapping, we yet had reason for congratulation that no evil had resulted. Very little sponging of the abdominal cavity was required, and but few sponges were introduced, principally the flat one to keep the intestine back. Immediately after the operation the patient was put to bed, and hot-water cans placed at her feet. She recovered from the effects of the ether very nicely, but was somewhat troubled with nausea. Brandy and warm water were given her three times and then discontinued.

At 2:30 P. M. a hypodermic injection of morphine, ¼ grain, was given.

At 10.30 this was repeated.

Not being able to pass her urine, it was drawn with a catheter at 5:30 P. M., and at intervals of three hours during the night. Through the night she took sips of cold water, and was fairly comfortable, considering the noise outside due to a political parade.

October 17—milk toast; two small slices.

9 A. M. Fl. ex. dig., m. xvi.
Aquæ, fl. ℥ ij.
Sig. ʒ j. every two hours.

9:30 P. M. Hypodermic morphine, ¼ gr.

October 18, 10:30 A. M. Mutton broth. At 11, medicine. At intervals she took toast and broth.

4:10 P. M. She passed water without catheter.

5:30 P. M. Passed catheter again, as she so much desired to urinate.

6:30 P. M. Hypodermic. A hypodermic was given about every six hours during the first three days.

October 19, 9:10 P. M An enema without moving bowels. October 21, bowels moved.

The medicine (fl. ex. dig.) discontinued, the patient taking quite a good amount of nourishment—beef-tea, chicken broth and some milk, but not much, and taking the beef-tea more as a medicine, and not that she relished it.

Stitches were removed, and the wound found closed mostly by first intention, excepting a small pocket of stitch-hole abscess.

From this time the patient went on to a nice recovery; she slept very well, but not soundly.

On the twelfth day she stepped from one bed to another without any serious results, although permission was not given her. She left the hospital November 8, 1884, in very good health, and at the present time is doing well.

The temperature varied between 99° and 102°. Pulse 140 after operation, gradually getting down to normal.

CASE II.—*Ovarian Cyst—Recovery.* E. J.; age 62; married. Residence, Whitehall, N. Y. Brought to my office (through the kindness of Dr. Holcombe), for examination and diagnosis, ten days previous to entrance to hospital.

Enlargement began in left side. She had been troubled for about a year. From the first the tumor had been increasing in size, but had never been tapped. Had had only one child, still living.

Her father died of typhoid fever, her mother of old age, and a sister of dropsy. Had two sisters and one brother living. Family history good. No history of tumor nor of a tubercular diathesis. She entered the hospital November 5th in very good health, and on November 6th the operation was performed, patient having been prepared as the previous one. I was assisted by Drs. Boyd, Ward, Snow and Hailes, and my two medical students. There were no adhesions, and the operation was done in thirty-five minutes. Tumor weighed twenty-five pounds. Good pedicle and secured in the same manner as the preceding case. Patient was then put to bed and every precaution taken against chills. There was very little nausea and no vomiting. Temperature was taken every six hours, and at no time was it very high. The pulse was somewhat accelerated. Fl. ex. dig. was administered in ½-drop doses with the desired effect.

A hypodermic of ¼ gr. morphine was given at 2 P. M., and after that every six hours during the first two days, and then not so often.

She drank some milk in the afternoon, and during her entire sickness it was her principal nourishment. Beef-tea, broths, toast, etc., were given.

On the fifth day the stitches were removed, the wound healing, except at one point, by first intention.

Her bowels moved on the sixth day by the use of enemata and sulphate of magnesia (30 grs.) every hour. Four doses given. From this time on the case went along very nicely. One-grain doses of quinine were given her three times a day.

During the first three days her urine was drawn, but after that she did not have so much trouble. She made a very rapid recovery, leaving the hospital November 26, 1884, cured.

I have since heard from her as being in good health. Temperature and pulse scarcely varied from normal.

CASE III.—*Double Hydro-salpinx—Removal of Uterine Appendages—Recovery.* Mrs. A., aged 34. No children. Patient of Dr. D. C. Case, of Slingerlands, N. Y., who had previously made the diagnosis of hydrosalpinx. She had been an invalid for the past eight years, at the beginning of which she injured herself by lifting some heavy article of furniture, feeling great pain at the time in the inguinal region. About four years ago she had a sudden gush of fluid from the vagina. Menstruation quite regular, but very painful and prolonged, so that she seldom had more than a week's rest out of the four.

Patient was operated on November 21, 1884, in the same manner as previously described, the operation lasting about an hour, as the adhesions were so great about the appendages. The incision was about three and one-half inches long in the median line. The abdominal walls were found to be an inch and a half in thickness. Numerous small vessels were cut, and one on the right side in subperitoneal layer was ligated, the ligature cut short and left, in the hope that it might encyst. An examination showed a cystic degeneration of the right ovary. The Fallopian tubes were greatly enlarged, and a fibroid of the uterus, about the size of a hickory nut, was also found in the fundus. Both of the ovaries and a greater portion of the tubes were removed, the stumps secured by the Tait knot and left in the abdominal cavity; the parts were sponged out and the wound closed by five deep and three superficial sutures. The patient was then sponged off and put to bed, with hot-water cans at her feet. She came out from under the influence of the ether well.

Patient from this time made a good convalescence, abscess from deep ligature healing slowly. In every respect she is greatly improved, and has not felt so well in years. Temperature and pulse almost normal during recovery.

Case IV.—*Uterine Myoma—Unsuccessful Attempt at Removal of the Uterine Appendnges—Recovery.* Jane H., colored; single; aged 56. Has been an invalid for the past twelve years. Has had great pain at each menstrual period and excessive hemorrhages. Both Dr. Van Vranken, of West Troy, and myself have tried for a period of three years every form of treatment, without any permanent good resulting.

This case is fully reported by Mr. Tait in his clinical lecture at the Albany Hospital, September 10, 1884. [See page 5. January, 1885.]

To prevent her sufferings, and, in fact, to save life, I decided to attempt removal of the appendages. Operated November 28, 1884, at 11 A.M.,assisted by Drs. Perry, M. J. Lewi and Babcock, three of my medical students also being present. Operation lasted fifty minutes. An incision was made in the median line about three inches long. The abdominal walls were thin. The uterus, tubes and ovaries were found to be bound down by such firm adhesions that it was not thought best to go on with the operation; in fact, it could not be continued. The pelvic cavity was carefully sponged out and the wound closed by five deep and one superficial sutures. Patient came out from ether well, with some slight vomiting. The wound was dressed with the Gamgee pads and the patient put to bed, with hot-water cans to her feet. At 12.30 she had a slight chill, lasting about half an hour. Was given half an ounce of brandy in water. Temperature and pulse did not vary much from normal. Patient when well was told result of operation without bad effect. Singular to report, she had no hemorrhage from the uterus, and at this time, June 1, 1885, is thoroughly well.

In all of my operations here reported I desire to thank Dr. Bradbury, house physician, for the skillful manner in which he gave the ether. Also Drs. Babcock and King, assistant house physicians, and medical student Larkins, for care and attention to patients.

Case V.—*Abdominal Section—Firm Adhesions—Unsuccessful Attempt at Removal of Appendages—Death.* Mrs. J. G. R., aged 43; married. First child born one and a half years after marriage. Died at birth. Mrs. R. had convulsions at the time, and was partly unconscious for nearly three weeks. Mind was not fully restored in a year. Had albuminuria. Second child now seventeen years old. At its birth Mrs. R. had two or three convulsions. Instruments used. Nursed babe one year. Did well. Following this she had two miscarriages—three months—about two or three years apart.

After 1872 she was treated nearly three years for ulceration and retroversion. Wore many instruments.

I first saw her December 4, 1885. She was then pregnant. Shortly after a premature delivery of a seven-months' child, living twelve days, occurred. Albumin in urine. Then treated her for subinvolution, and she did nicely.

March, 1877, another seven-months' child, living half an hour. Did not recover so well from this sickness. Uterus large and sensitive. Cupping, glycerin, etc. Retroversion very decided. Pessaries used with some success. Small polypus removed from cervix. Some ulceration. Improved; became pregnant, but miscarried (three months) at Lake George, August, 1880, and came home during this. Hemorrhage frightful; very ill; slow recovery. Retroversion very decided—more than ever. Excessive menstruation. Menorrhagia now began. Pessaries, glycerin tampons, and every thing else, except warm douches, unsuccessful.

Cellulitis, with adhesions, followed. Curette used, which did some good for a time, then all symptoms grew worse. Attacks of vomiting, pelvic peritonitis, irritable bladder, no albumin. No pessary in nearly two years. Iodine, oleates, hot water. Curette used before last period, and then better for about three months. Dr. T. G. Thomas saw her in June, 1884, and said she could only wait for change of life. Would not recommend removal of appendages or change of treatment.

Passed the summer of 1884 in much suffering, having two severe attacks of pelvic peritonitis, with much hemorrhage about every three weeks.

She became exceedingly anxious to have Tait's operation performed, and quietly but firmly insisted upon its being done. All the dangers of the operation, regarding peritonitis from the adhesions, etc., were clearly stated to her, and yet she desired this chance for bringing her some comfort, as life was now a burden. I at last consented to operate, and did so, assisted by Drs. Ward, Townsend and Larkins. The right ovary and tube were so bound up with adhesions that it became impossible to do any thing with them. The left ovary and a portion of the tube, after great embarrassment, were removed. The roof of the pelvis was one mass of adhesions. Not much hemorrhage. Wound closed in the ordinary manner. No drainage tube.

The operation occurred January 8, 1885, and lasted about fifty minutes. She came out from under the influence of the ether well; some slight vomiting, which continued at intervals, being controlled at times for a period of twelve hours.

Temperature and pulse gradually increasing.

January 10, 11:40 A. M. Vomiting began and continued about every ten minutes until 12 o'clock, when she began to sink; cold extremities, pulse almost imperceptible. She was given hypodermics of brandy and ether every fifteen minutes until twelve doses had been given. At 4 P. M. she rallied, and at 6 P. M. seemed much easier than she had been before that day.

At 7:30 she began vomiting again, first the contents of stomach, then regurgitated bile, and continued to sink until 5 A. M., January 11th, when she died.

Cocaine in Burns.—Dr. Herbert D. Ensign, Boone, Iowa, uses externally a four per cent. solution in cases of burns and scalds; states that it is very satisfactory, relieving pain in from three to five minutes.—*Iowa State Medical Reporter.*

ABSTRACTA.

CHOLERA: ITS MANAGEMENT IN EGYPT.—Following is a copy of a circular lately received by Dr. Van der Veer through a friend in Egypt. Although two years old, it is good for the present date when we read of a thousand deaths, and more, in Spain every day:

ADMINISTRATION OF THE EGYPTIAN RAILWAY, TELEGRAPH AND PORT OF ALEXANDRIA—ADVICE TO STAFF DURING THE PRESENT EPIDEMIC.

1st. Conform to and assist every measure of prevention put in operation by the authorities. If you apprehend danger from any public nuisance, immediately complain, in writing, to the Railway Board, who will communicate at once with the Board of Health.

2d. Apply yourself to make your own home healthy by the instant removal of every nuisance about it and in it. See that your windows will open and shut so as to admit plenty of fresh air night and day.

Every epidemic rages amid filth. Make your children avoid all bad-smelling places. Whitewash all your rooms and water closets and cellars. This has been found one of the most effectual preventives of cholera. Avoid crowding your sleeping rooms.

If there is a constant offensive smell within your dwelling, which other people notice, be sure that there is danger at hand, and do not rest till you have ascertained the cause and had it removed.

Personal cleanliness and house cleanliness are both health-givers, and are of vital importance when the elements of disease and death are around us.

3d. Having looked to your dwelling within and without, consider then what is best for your welfare in food and clothing.

If there is any food or drink injurious at ordinary times, it is doubly injurious in the presence of cholera. Be careful not to drink impure water. To be quite safe it ought to be boiled and then cooled in "goolahs" for drinking purposes. The "sahareeg" water or well water is to be preferred to the ordinary Nile water at this season. Care should be taken to have the "Zeer," or water filter, in an airy position and not near any water closet; wash out the "Zeer" frequently.

Avoid drinking alcoholic beverages of every kind unless your doctor considers that you require them.

Eat as usual a mixed diet, but avoid excess even of wholesome food. Do not take what you know to be difficult to digest.

Fruit, only partially ripe, should be cooked before eaten, and all raw ripe fruits should be washed before they are put into the mouth.

A flannel bandage should be worn round the abdomen next the skin, so as to avoid a chill across the bowels. The rest of the clothing should be rather warm than otherwise.

4th. Avoid over-fatigue and excess of every kind. Fasting and feasting are equally bad.

5th. When called upon to wait on a choleraic case, be careful not to touch what has been vomited or what has come from the bowels, for in these is the germ of the disease. To make sure of your being properly disinfected, wash your hands in water with a little carbolic powder and dust some of the powder also over your clothes.

Disinfect the patient also by dusting the carbolic powder from time to time on the bed and under the bedclothes, and do not throw down the water-closet what comes from the patient, but have it put into an earthenware vessel and mixed with chloride of lime and vinegar, equal parts, and then some water added. Every two or three hours the contents should be buried in the ground. Of course where there is no garden or ground it must, notwithstanding the risk, be thrown down the water-closet. But the fact that the infected material has been in a strong disinfectant mixture for a time renders it harmless, only one cannot always depend on this process being properly carried out. Bury, therefore, when possible.

6th. *Disinfectants.*—The best disinfectant is

(*a*) *Pure air*, and plenty of it. The germ of cholera becomes entirely inert in the open air, and this is the reason why it always travels along the routes of communication, whatever the direction of the wind may be.

Persons and baggage coming from infected districts ought, therefore, to be isolated when they, by any chance, come into a non-infected district, and it is the duty of any one who comes to know such circumstances that he should communicate it at once to the authorities through the Railway Board.

(*b*) *Heat* is the next disinfectant. It has been ascertained that the germ of cholera is destroyed by a heat of 140° Fahrenheit. Hence, if our food is well cooked and our drink boiled, the danger of getting cholera in that way is removed, and it is well to understand that the evidence in favor of the communicability of cholera by means of water and food contaminated with the cholera germ is now overwhelming.

(*c*) *Carbolic Acid* of the strength of 5 per cent., either in solution or in powder, is a very good disinfectant, but weaker combinations are utterly useless.

(*d*) *Sulphurous Acid* fumes are the most potent volatile disinfectant known, and the easiest way of obtaining this disinfectant is to burn some ordinary sulphur in the place where the disinfectant is required.

(*e*) *Chlorine Gas* is also a most powerful disinfectant, and is most frequently used for disinfecting water-closets and cesspools, because there is no difficulty nor danger in the management of it.

It is obtained from chloride of lime by adding a diluted form of hydrochloric, sulphuric or acetic acid. Ordinary vinegar being a diluted form of acetic acid, and being generally in abundance in every household, I should advise it to be used, mixing it with chloride of lime in equal parts. Avoid, however, throwing this disinfectant down iron or lead pipes.

(*f*) *Permanganate of Potassa* is a true disinfectant, oxidizing and destroying all contagious material, as well as putrid matters; but the quantity required and the price render its use almost impossible. If there is no obstacle to its use, then the best combination is as follows:

1 hectogramme (3½ ounces) Permanganate of Potassa,
1 hectogramme (3½ ounces) Hyposulphite of Soda,

mixed in 10 litres (2 gallons) of water; then one-fifth of this is to be put into a bucketful of water and thrown down the water-closet at least once in twenty-four hours.

7th. (*a*) The best way of disinfecting the clothing and bedding of a choleraic case is to burn them. If not burned, clothing may be baked or well boiled with soda. Before being sent to the wash-house they should be steeped for half an hour in a 5 per cent. carbolic solution or in a mixture of chloride of lime and vinegar, two ounces of each to every gallon of water.

(*b*) *To Disinfect Rooms.*—Scrub floors with hot water and soft soap, which may contain 5 per cent. carbolic acid. The walls and ceiling should be brushed and wall paper removed. The furniture, if iron, is to be washed with a carbolic solution and removed from the room. Textile fabrics should be baked or boiled or spread out in the room for fumigation. In the last case sulphur is the best medium. It can be lighted by pouring a little alcohol upon it or by means of a live coal. Every 1,000 cubic feet of space require three pounds of sulphur. The doors and windows of the room are to be shut till next day and then thrown open. Whitewashed rooms, in case of becoming infected, should have the walls scraped and re-whitewashed.

(*c*) The dead body of a choleraic patient should be dusted well with carbolic powder and wrapped in a sheet saturated with a solution of 1 chloride of lime and 1 vinegar in 40 of water.

8th. *Description.*—Asiatic cholera is a specific disease characterized by violent vomiting and purging, with rice-water stools, cramps, prostration, collapse, suppression of urine, etc., tending to run a rapidly fatal course.

At the commencement of an epidemic, cholera manifests itself without a premonitory symptom, and death takes place in a very few hours; but ordinarily there will be a premonitory diarrhœa, the stools being copious and watery, followed by great prostration of strength.

If judiciously treated, many persons recover from this, *the first stage* of cholera, but if neglected the disease grows rapidly worse. The stools becoming more frequent, and have the appearance of rice-water. Vomiting now commences, and prostration is complete. There is intense thirst and severe cramps in the limbs, and the voice becomes husky and pulse imperceptible. The duration of this, *the second stage* of cholera, is very uncertain, but the weaker the pulse becomes the nearer the patient is to *the third stage*, or that of collapse, from which few recover. Those who recover, however, often succumb afterwards to some of the complications set up by the primary disease, such as suppression of urine, inflammation of stomach and bowels, etc.

9th. *Treatment.* In the first stage of epidemic cholera endeavor to stop the purging; here opium is our sheet anchor. The best way of exhibiting it in cholera is the preparation known by the name "Tinctura Chloroformi cum Opio (Kirby)" [℞ Tinct. opii, ℥ ss.; Spt. camphoræ, ℥ ss.; Tinct. capsici, ℥ ss.; Chloroformi, ʒ is.; Spt. vini rect. ad ℥ iis. M.], of which 20 drops for an adult and 5 drops for a child should be given in half a wineglass of water or chamomile tea every hour or two till diarrhœa ceases, and no nourishment given except beef-tea or chicken soup and rice.

If the diarrhœa is not checked and vomiting commences, the "Anticholerique selon Pasteur" [℞ Hydrarg. bichlor., gr. ij.; Spt. chloroformi, ʒ x.; Spt. camphoræ, ʒ v.; Tinct. lavand. co., ʒ ss.; Spt. rect. ad ℥ ij. M.] should be used and the other medicine left off. This "Anticholerique" contains the ingredients for killing the germ of the disease and for stopping the diarrhœa, vomiting and cramps, while it stimulates the heart and favors a general reaction.

It is very hot and biting, and has therefore to be mixed with a sufficient quantity of water or chamomile tea to make it palatable. The dose is a teaspoonful to an adult and half a teaspoonful to a child or young person, in a wineglassful of water, every quarter of an hour, every half hour, every hour, and so on according to the urgency of the symptoms. Six doses can be given without any danger, even if they are not any of them vomited, and the medicine may, according to these instructions, be administered by a non-professional person, but after giving six doses the physician's visit should be waited for.

Mustard poultices may now be applied over the bowels, and mustard with a little olive oil should be rubbed up and down over the cramped muscles.

Thirst should be assuaged by means of ice, which is very agreeable to the patient, while giving water to drink *ad libitum* would only hasten death. The ice should not be stinted, but let the patient eat as much of it as he chooses; he will frequently devour a pound or two of ice in the course of an hour. In the treatment of cholera there can be no question about the value of ice. The patient should be prohibited from drinking water beyond what he gets from the ice or has to take with the medicine. A little warm chamomile tea, however, may be given in small quantities from time to time to soothe the stomach and allay vomiting.

In the stage of collapse, heat and friction may be applied with advantage to the surface of the body, and give patient more chamomile tea to drink or even some iced water. Wine and stimulants at this stage do harm instead of good; therefore they must on no account be given.

When reaction comes on, guard against doing too much. Iced milk or arrowroot or weak beef tea may be administered by the rectum every six hours in case of great prostration.

Many nostrums have been put forward for the cure of cholera, and in 1865 they were all faithfully tried and found wanting. Since then some new combinations have been proposed, and, amongst the others, the one indicated above, which I hope may have good results.

J. A. S. Grant, M.D., C.M., etc.,
Senior Surgeon, Railway Administration.

Cairo, 14*th July*, 1883.

CHOLERA AND QUARANTINE.—Since the abolition of caravans, and the transportation of pilgrims by steamers, very much fewer cases of cholera occur at Mecca and along the land-route from Dejeddah. It is because all are kept, so to speak, in a certain lane, where they are under constant observation; their food, hygienic surroundings, are more carefully regulated, and cases occurring can be promptly treated and guarded. The same is true of steamers bringing emigrants to this country. * * The time of transit from European countries to our shores is longer than the incubative period of cholera. If, therefore, by careful inspection of all soiled clothing at the point of departure this factor of conveying the disease is eliminated, we have only to watch the development on shipboard of such cases as may have acquired the disease before coming on the vessel. The moment a case is recognized, or even suspected from any diarrhœal discharge, it should be promptly isolated, attendants quarantined, discharges at once disinfected, all soiled clothing promptly destroyed, attendants' hands washed for the slightest stain; it would be promptly suppressed. There is here but the primary factor with which we have to deal. The secondary ones, of contaminated water, floating germs, and conditions of the soil, are absent. If efficient measures are taken, a ship should be a favorable place to repress the disease. It would remain, then, for the land quarantine to maintain the vessel under observation for the requisite time to determine that no new cases occur. A series of measures that would suggest themselves promptly to any health officer should be taken, such as the removal of all from the vessel to a spot of absolute isolation, the thorough cleansing and disinfection of all the cabins, linen, etc.—*Dr. S. Oakley Vanderpoel, in Science* (*Sanitary number*), 743 Broadway, New York, July 10.

Bacteria as Therapeutic Agents.—Prof. Arnoldo Cantani, Naples, administered a pure culture of bacterium termo to a patient 42 years of age, having a cavity in left apex and sputa containing tubercle-bacilli. "On the 4th of May the inhalations began, using a pure culture of bacterium termo diluted with meat broth, by means of a hand-spray apparatus with double bulb. * * On June 1st the tubercle-bacilli were completely absent from the expectoration, and * * the general condition became excellent."—*Phila. Med. Times*, Aug. 8.

Hydroleine.—Fire-arms, by reason of modern improvements in the adaptation of cartridge and weapon, accomplish a nearly perfect combustion of the charge of powder within the gun-barrel. Hydroleine is one of those preparations which has for its object, in analogy to modern gunnery, to provide a dose capable of entire and rapid assimilation in the alimentary canal.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D., A. VAN DER VEER, M.D., LORENZO HALE, M.D.,
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. SEPTEMBER, 1885. NO. 9.

THE BOARD OF HEALTH AND THE PUBLIC WELLS.

The Albany City Board of Health has fulfilled its responsibility in regard to the wells. At least through it an examination into the condition of the well waters has been made, and they have been found just as all intelligent physicians have insisted for years—*bad*. How could it be otherwise? Any excavation into the sewage-saturated soil of this city will inevitably collect contaminated matter. The river water, as the writer has heretofore remarked, must be, bad as it is, a symbol of purity compared with these sparkling, cold, delusive wells. No well ought ever to be dug within the limits of this city.

Now, in view of the conviction having become a proven certainty, it appears to be the obvious duty of the board to close them up. Their resolution to do so was eminently proper. But in the face of the opposition that has risen in the southern section, where they were found especially foul, and toward which the exterminative action was especially directed, it may perhaps be a question whether it is their duty to take the onus of enforcing their order. The opposition of aldermen and an occasional physician and a twenty-feet-long petition means a strong public sentiment. All good purposes have to dally after the lack of intelligence of the mass. There is no way to meet this opposition by half-way measures. Of course cleaning them out would do no good, for the leaching of sewage runs in all around at every foot of their depth. Driven wells would be cleaner for a time, if they passed through an impervious bed of clay below all sewers and below all tappings of deeper excavations, but no assurance of this can be had of them. But these condemned wells, which Dr. Tucker says contain the worst water he ever analyzed, nothing can be done with except to fill up, or to put the pump handle so high that children cannot reach it and then to nail up conspicuously a sign, "This water is dangerous to drink." This might educate the people; it would for a time relieve the board of further responsibility.

The board is to be highly commended for the good work it is doing and for the combination of energy and sagacity which it has heretofore shown. It will doubtless do the best thing in this case, and it has a health officer who will execute its behests without fear or favor. F. C. C.

——OPIUM POISONING AND NITRITE OF AMYL.—On page 220 of THE MEDICAL ANNALS for 1884, and on page 179 of this current volume, we noted two cases of opium poisoning treated with nitrite of amyl, which treatment was believed by the writers to be wholly novel and unprecedented. By reference to THE MEDICAL ANNALS for May, 1882, we showed that this treatment had been used in Albany at a previous date. The *Philadelphia Medical Times*, August 8, 1885, thus comments on the case given in May, 1884, in the *Texas Courier-Record of Medicine:*

> The known tendency to cerebral congestion in opium poisoning would, as a rule, forbid the use of nitrite of amyl. In this case, however, five hours had elapsed since the laudanum had been taken, and belladonna had been administered before the amyl nitrite was given. The paralyzing action of the amyl upon the pneumogastric and the vaso-motor nerves, and the depressing effect upon the heart, would render it an unsafe agent to administer in narcotic poisoning. Possibly its good effect in this case is to be attributed to the fact that the dose of the opium had ceased to be operative.

——JOURNALISTIC CHANGE.—*The Medical Chronicle*, a successful monthly medical journal edited by Dr. George H. Rohe, of Baltimore, has, with the present issue, become consolidated with the *Philadelphia Medical Times.*

We take special pleasure in announcing that Dr. Rohe will hereafter be associated in the editorial management of the *Times*, and will pay attention particularly to giving Baltimore and Washington medical matters greater prominence in its pages than they have hitherto received.

In token of its increased scope and non sectional character, the word "Philadelphia" will be dropped from its title at the end of the current volume in September. We hope that these changes will prove acceptable to our readers.—*Philadelphia Medical Times*, Aug. 8, 1885.

OBITUARY.

William N. Hays, M.D.

The medical profession of Albany, which has suffered so severely from death during recent years, has again experienced a loss in the decease of Dr. William N. Hays, who for nearly nine years was engaged in the active practice of his profession in this city.

William N. Hays was born January 22, 1850, in the town of New Scotland, Albany Co., N. Y. He was one of seven children born to William and Elizabeth Hays, five of whom, four brothers (one of them a graduate of the Albany Medical College) and a sister, are still living. When he was fourteen years old his father removed to Schodack, Rensselaer county, in this state. William received his education first in the district schools and afterwards in the Falley (Otsego county) and Whitestown (Oneida county) Seminaries. He taught school while securing his education, and in March, 1872, registered with the late Dr. James H. Armsby as a student of medicine. In June, 1874, he was appointed to fill a vacancy in the house staff of the Albany City Hospital, and reappointed the following year. He was graduated from the Albany Medical College in December, 1875, filling the position of class president and receiving first honorable mention for his thesis entitled "Diphtheria." After practicing his profession for a few months in West Stockbridge, Mass., and in Newark, N. J., he opened an office on November 27, 1876, in West Albany, and continued in practice there up to the time of his last illness. Doctor Hays died July 29, 1885, at the Hudson River State Hospital, Poughkeepsie, from the exhaustion of acute mania, after a sickness of only nine days, induced by overwork. The deceased was a member of the Medical Society of the County of Albany and a deacon and trustee in the West End Presbyterian Church, both of which bodies have taken appropriate action in respect to his memory. On September 11, 1878, he was married to Sarah E. Lansing, who with three children, Walter E., Lansing and Leland, survive him. Both his parents are but recently deceased.

Doctor Hays was an unflagging and conscientious student, loving truth for truth's sake, a cheerful and genial companion, a kind and loving father and husband, an earnest, indefatigable practitioner, respected and beloved by his patients, and an honorable, energetic citizen, whose early and untimely demise is a genuine loss to the community.

W. O. STILLMAN.

MINUTES OF THE SPECIAL MEETING OF THE MEDICAL SOCIETY CALLED TO TAKE ACTION ON THE DEATH OF DR. HAYS.

A special meeting of the Medical Society of the County of Albany was held at Alumni Hall, Albany, July 31, 1885, at 4 P. M. Present: Vice-President Perry and Drs. T. P. Bailey, Bartlett, H. S. Case, Cook, Fleischman, Hailes, H. Hun, M. J. Lewi, Morrill, Munson, Murray, W. J. Nellis, Russell, Shanks, Skillicorn, Smith, Stillman, Stonehouse, Thompson and Ward; also Dr. L. E. Blair.

The Vice-President, Dr. T. Kirk. Perry, called the meeting to order, and stated its objects in the following words:

Gentlemen—It needs at this time no further reminder as to the painful necessities of the occasion, for the quiet manner, sad looks and almost restrained speech of one and all testify to the universal feeling of sorrow and loss which pervades us as a society. Yes, those very unexpected messages which this morning's mail brought to each of our doors must, I think, have caused the universal exclamation, "Is it possible! So unlooked for, so sad—who, who will be the next!"

It had seemed as if the present administration might have been spared this trial, as it has thus far had to chronicle no diminution, but rather a decided increase, in the society's membership; and, in view of the many losses we have been called upon to mourn in the years just gone by, it had been our hope and wish to conclude our labors with a record of naught save pleasant concourse, increased interest and unvarying success. The silent reaper has, however, seen fit to enter our midst, and to-day another vacant chair attests but too truthfully to his prowess.

We can think of the Doctor just gone, we can picture to ourselves his rugged form and pleasant face as seen at many of our gatherings, we can in fancy hear his manly voice as it participated in debate or rehearsed the many virtues of a departed brother; we cannot, however, again grasp his hand, look him in the face, wish him good-day or Godspeed—he has gone.

Now, while it is at all times and at best a most unenviable and unpleasant task to preside at a meeting like the present, the duties become doubly painful and arduous when there is combined with the natural feeling of sadness the additional and special one of intimate fellow separation. Such is the position I occupy to day, with our president hundreds of miles away and as his substitute and temporary successor. I am called upon not only to mourn as one of a large society of sympathizers, but as a personal friend, a not very distant neighbor and a trusted *confidante*—for were we not classmates? Ten years have gone by since we wished each other good-night, renewed health, abundant crops and a rich harvest. During all this time we have remained true to our student vows, loyal to our *alma mater*, our profession and training, true to ourselves, friends and confidants to the last.

Dr. William N. Hays was born in New Scotland, Albany county, January 22, 1850, and was consequently in his thirty-sixth year. From boyhood he had been a most tireless worker, as a scholar, teacher and, later, professional student. As a physician he was eminently successful, having gathered together a most successful and lucrative practice. Beloved by his many patients, surrounded by a host of kind and appreciative friends, and, above all and more than all, possessing the love and companionship of a most estimable wife and dear children, there was nothing lacking to make life worth the living and the future a cloudless joy. For him, however, there is now no future, neither is there any past; he has solved the otherwise unfathomable mystery; his rest and peace are now eternal. We can all mourn for a friend departed, our society's roll numbers one less, his many friends will miss a familiar, pleasant face, his lonely wife and orphaned children will mingle in their prayers an earnest remembrance for a devoted and loving husband, a kind and thoughtful father.

On motion of Dr. Ward the following committee was appointed by the Vice-President to draft resolutions: Drs. W. O. Stillman, S. G. Shanks, D. H. Cook, William Hailes, Jr., and S. B. Ward.

After a recess, the committee, through its chairman, Dr. Stillman, reported as follows:

WHEREAS, The Medical Society of the County of Albany, at a special meeting called on July 31, 1885, has heard with sincere regret of the death of Dr. William N. Hays, of West Albany, an active member of the said society; therefore, be it

Resolved, That it express its sense of loss and appreciation of the many admirable and manly qualities of Doctor Hays, by whose death the medical profession in Albany has lost an assiduous, earnest and honorable member, who was yet in the flower of his years and strength.

Resolved, That the sympathy of the society be respectfully extended to his bereaved wife and family, who suffer so greatly from this sudden and unspeakable sorrow.

Resolved, That the society attend the funeral in a body as a testimonial of respect to the memory of the deceased.

Resolved, That a copy of this preamble and resolutions be transmitted to his wife, and also entered upon the minutes of this meeting by the Secretary of the society.

DR. JOHN SAVAGE DELAVAN.

This community has never been more shocked and saddened than by the tragic death of Dr. John Savage Delavan, on the 7th of August last. But a few days ago he was full of the joyous anticipations of his holiday in the Adirondacks. Hardly had he gone when the startling news comes back of his drowning in one of the little lakes, along with his guide, by the upsetting of their boat, Mrs. Delavan alone of the party escaping, after clinging nine terrible hours to the boat. The sadness of the end would call out every sympathy, and it is deepened and falls with all the weight of a personal loss upon all of his professional associates here and to a great host of friends, for there are few so generally held in affectionate regard or whose death is so deeply lamented.

Dr. Delavan was born in Ballston in 1840, but has spent most of his life in this city, where, and at Union College, he obtained his early education. He also studied medicine here, graduating at the Albany Medical College in 1861; subsequently he pursued his studies further in Europe. After practicing medicine here for about a year, in 1863 he was commissioned Assistant Surgeon of the 169th New York Infantry; not being mustered, however, owing to the lack of numbers in the regiment, he entered hospital service in Washington. He after a time was appointed 1st Assistant Surgeon of the 1st Conneticut Artillery, and remained with that regiment through the war, declining the surgeoncy of the 1st New York Cavalry, offered him by Gov. Seymour. He was in all artillery battles before Petersburgh, down to the repulse of the Confederates at Fort Steadman, and was at the "Mine" and taking of Fort Fisher. After the war he was appointed Pension-Examining Surgeon, and practiced here for several years. He went to Geneva, Switzerland, in 1872, and resided there for four years, receiving the position of Vice-Consul to that locality. Now for several years he has engaged in the active pursuit of his profession in this city again, having a considerable consultation practice, especially in obstetrics and gynecology. When the State Board of Health was organized in 1880, he became one of the three Commissioners of Health that partly compose it, and has ever since been one of its most valued and influential members. He was a member of the County and State Homœopathic Societies and an active contributor to their work by word and pen. From the American Institute of Homœopathy he recently resigned his membership. He was, however, far from being an exclusive sectarian in professional faith, for he was one of the most liberally minded men, and was full of anticipations of the doing away with all sectional distinctions. As an apostle of this creed his loss is the more lamented by all of like hopes. Few have so many of the innumerable qualities of the typical physician, for there are not many who have to such a degree those engaging qualities of mind and heart that win and charm all with whom the fortunate possessor of them comes in contact. F. C. C.

OVARIOTOMY.—Dr. Joseph A. Flynn ('84), Pittsfield, Mass., writes that the successful ovariotomy noted on page 221, July ANNALS, was performed by his preceptor, Dr. W. M. Mercer, of Pittsfield, assisted by himself (Dr. Flynn). The operation was done according to Tait.

BOOKS, ETC.

HAMILTON ON FRACTURES AND DISLOCATIONS. Published by Henry C. Lea, Son & Co.

Surely the author of this work is the "noblest Roman of them all." The last edition is so complete, so full of facts and valuable suggestions, that no one who attempts to practice surgery should feel safe without having its pages to consult.

Again the author and publisher are to be congratulated upon the thoroughness with which they have completed their work.

A. VAN DER VEER.

KELSEY ON THE RECTUM. William Wood & Co., publishers.

This book has stood the criticism of the press for two years, and with unvarying success. It is complete in all the author claims to treat, making it one of the most thorough, satisfactory and reliable works we have upon this subject. To American practitioners it is of greater value than similar works by English authors, and they have confessedly led in treatment of this topic for a number of years past. There are but few points in the work to which one can take exception, and these are of minor importance. No doubt a new edition will soon be called for, and we congratulate the author upon the excellent manner in which he has accomplished his task.

The publishers, in type, in paper, in binding, in every thing, have done their work well, as they always do. A. V.

SECOND ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF TENNESSEE. 1880–1884.

This board of health was organized in 1877, three years before that of our own state, and this appears to be their second printed volume. It contains about 600 pages, one-third of which constitutes the report of the secretary, and the rest is made up of papers on special topics. Included in the former are some very well prepared circulars on small-pox, diphtheria and like diseases. The report is, further, a summary of the work of the board for the years covered by it. Like our own, its work appears to be largely advisory. Of the special articles, the president of the board, Dr. J. D. Plunkett, of Nashville, contributes those on "Vital Statistics," on "Bovine Tuberculosis," and on "Ozone and its Relation to the Public Health," all of which are valuable. There is much of general interest in these contributions, and the volume is, altogether, commendable, and reflects credit on the state and the board which it is fortunate to be served by. F. C. C.

MISCELLANEOUS ESSAYS, PEN PICTURES AND DIALOGUES. By Alvah Traver, A.M. Duodecimo, 269 pages. Published by Burdick & Taylor, 481 Broadway, Albany, N. Y. For sale by the author in person and by the publishers. Price, $1.50.

Alvah Traver, the author of the above named volume, after graduating from Union College (now Union University), was for a few years principal of Sand Lake Academy; later he was admitted to the bar in New York city; thence he removed to Troy, N. Y., where for over twenty years he has been engaged in the legal profession. For two or three years past he has devoted much time to literary pursuits.

The volume before us is a collection of concisely written essays calculated to stimulate the mind to more enlarged investigation of the many subjects presented. It shows that the author is not only a gentleman and a scholar, but, more than that, a teacher. The book is comparable with, although quite different from, the posthumous publication "This—Our Life," by the late Prof. Anthony, of Albany. In each book appear some of the best efforts of one who was an esteemed instructor and helper of young people.

Mr. Traver's "pen ideographs" and dialogues are eminently didactic and of a high moral tone. The thought-germs presented, falling upon fertile minds, like seed-grain on good soil, will naturally yield a product of good. L. H.

PAMPHLETS, ETC., RECEIVED.

Acknowledgements of the following have been delayed from want of space:

"Koch's Method of Isolating and Cultivating Bacteria, as Used in the Laboratory of the Bureau of Animal Industry, Department of Agriculture" [Washington, D. C.]; being an abstract of a communication to the Biological Society of Washington, D. C., April 18, 1885, by Drs. D. E. Salmon, and Theobald Smith (Albany Medical College, '83), printed in *The American Monthly Microscopical Journal*, May, 1885.

"Bacteria Culture." By Theobald Smith, M.D., Washington, D. C. Portion of a lecture before the Biological Society, in the lecture room of the National Museum, April 2, 1885. Reported in *The National Republican*, Washington, D. C., April 23, 1885.

Annual Catalogue of the Albany College of Pharmacy, Department of Pharmacy of Union University, for 1884-5, and announcement for the session of 1885-6.

Catalogue of the Albany Medical College, Medical Department of Union University, fifty-fourth annual session, 1884–5, and announcement for session 1885–86.

Association of the Alumni of the Albany Medical College; Proceedings of the Twelfth Annual Meeting, March 4, 1885; containing President's Address by H. T. Hanks, M.D., class of '61, Albany Medical College, now of New York city, on "Peri-Uterine Cellulitis and Peri-Uterine Peritonitis;" also containing the Alumni Lectures by Prof. William H. Thomson, class of '59, Albany Medical College, now of New York city, on "The Germ Theory of Disease."

Report of the Mutual Reserve-Fund Life Association of the City of New York, and of Medical Examiner John J. White, M.D. (A. M. C., '79).

New York Institution for the Instruction of the Deaf and Dumb. Isaac Lewis Peet, LL.D., principal; Dr. George S. Knickerbocker, M.D. [formerly of Albany], superintendent, Station M, New York city.

Problems of Nature. H. B. Philbrook, editor, 21 Park Row, New York. Semi-monthly, 4-page folio, $1.50 a year.

"Causes of Sterility." By Samuel Peters, M.D., Cohoes, N. Y. Reprint from *American Journal of Obstetrics*, William Wood & Co., 57 and 58 Lafayette Place, New York.

"Foreign Bodies Left in the Abdomen after Laparotomy." Dr. H. P. C. Wilson, Baltimore. Reprint from Vol. IX., "Gynecological Transactions," 1884.

"Case of Uterine Fibroid." By Howard S. Paine, M.D. [A. M. C., '81], Albany, N. Y. Reprint from Proceedings of Medical Society of Northern New York.

"Surgical Notes from the Case Book of a General Practitioner. By William C. Wile, M.D. Reprint from *New England Medical Monthly*, July, 1885.

Dr. W. C. Wile, of Sandy Hook, Conn., in the *New England Medical Monthly*, of which he is the editor and proprietor, publishes a series of surgical cases under his treatment which reflect great credit on his skillful and successful management, and cannot fail to benefit the practitioner who reads them with care. The *New England Medical Monthly* is one of the most valued of our medical exchanges, and we doubt not has the same reputation among the medical fraternity.—*Pharmaceutical Record.*

"Muriate of Cocaine in Ophthalmic Surgery." C. J. Lundy, M.D. Reprint from *The Physician and Surgeon*, Ann Arbor, Mich.

"The Dry Treatment of Chronic Suppurative Inflammation of the Middle Ear." C. J. Lundy, M.D., Detroit. Reprint from Transactions of the Michigan State Medical Society.

"Vital Statistics in Tennessee." Report by J. D. Plunkett, M.D., Nashville, Tenn.

"School Hygiene in Tennessee." By D. F. Wright, M.D., Clarksville, Tenn.

Report of Proceedings of Illinois State Board of Health.

Michigan State Medical Society: Transactions for 1884.

"On Oxygen as a Remedial Agent." By Samuel S. Wallian, A.M., M.D. Reprint from the *Medical Record.* 52 pp.

"School Hygiene in Relation to its Influence upon the Vision of Children. President's address, Medical Association of Georgia, 1884. A. W. Calhoun, M.D., president, Atlanta.

"Cholera Infantum." By William Perry Watson, A.M., M.D., Jersey City, N. J., Assistant to the Chair of Diseases of Children in the New York Polyclinic. Reprinted from the *Archives of Pediatrics*, Philadelphia, August, 1885.

"Specialties, and their Relation to the Medical Profession." By L. Duncan Bulkley, A.M., M.D., attending physician for skin and venereal diseases at the New York Hospital, out patient department, etc. Read before the American Academy of Medicine, at its annual meeting at Baltimore, Md., October 29, 1884; approved for publication by the Council. Reprinted from the *Journal of the American Medical Association*, December 13, 1884.

"Disinfection and Disinfectants." Preliminary report of the American Public Health Association. George M. Sternberg, M.D., surgeon U. S. Army; Joseph H. Raymond, M.D., commissioner of health of city of Brooklyn; Charles Smart, M.D., surgeon U. S. A., member National Board of Health; Victor C. Vaughan, M.D., member Michigan State Board of Health; A. R. Leeds, M.D., member New Jersey State Board of Health; W. H. Watkins, M.D., medical director Auxiliary Sanitary Association, New Orleans; George H. Rohe, M.D., Baltimore, committee on disinfectants.

PERSONALS.

—H. B. Clement and H. J. Grose have formed a copartnership under the firm name of H. B. Clement & Co., who will hereafter conduct the druggist and apothecary business in Albany, at the old corner established by Mr. Clement in 1859. Mr. Grose has long been associated with Mr. Louis Sautter as pharmacist at his Tweddle Hall Pharmacy.

—E. T. Rice, formerly of the firm of Clement & Rice, succeeds Dr. John L. Cooper at No. 13 Clinton avenue, Albany, in the drug business. Dr. Cooper is engaged in the practice of medicine; office, 705 Broadway, Albany.

—Dr. E. F. Bronk ('84), of this city, who has lately returned from a protracted course of medical study in Europe, has recently opened an office in Amsterdam.

—Dr. J. H. Van Rensselaer ('85), of Wilton, Saratoga county, who has been with Dr. Frank H. Fisk ('83), 76 Hudson avenue, Albany, during the latter's illness, left for his home September 8. On October 6 Dr. Van Rensselaer will join the staff of the Albany Hospital as one of the house physicians.

—Dr. David Gilliland ('85), 645 Central avenue, Albany opposite the office of the late Dr. William N. Hays.

—Dr. E. Hudson Rider ('85), Schodac Center, Columbia Co., N. Y.

—Dr. D. C. Moriarta ('85) has opened an office in Saratoga, N. Y.

—Dr. Thomas P. Scully ('85), Cohoes, N. Y.

MEDICAL NEWS.

ALBANY MEDICAL COLLEGE—OPENING OF THE FIFTY-FIFTH COURSE OF LECTURES—THE INTRODUCTORY EXERCISES.

Students fairly swarmed about the Medical College yesterday morning [Tuesday, September 8] at the opening of the fifty-fifth course at that institution. In the college library, Dr. Tucker, the registrar, was kept busy attending to the wants of the matriculants, who are this year even more numerous than last. At noon the sound of the triangle called the throng who had been exchanging greetings on the green in front of the college, or in the well-known halls, to the amphitheater, where, with many of the professional men of the city, they listened to the opening exercises. Rev. Horace C. Stanton, of the Clinton Square Presbyterian Church, offered prayer, after which the introductory lecture of the course was read by Dr. S. B. Ward from the manuscript of Dr. Franklin Townsend, Jr., who had been chosen for the honor, but who was called from the city by the serious illness of one of his family. The subject of the lecture, which happily combined the elements of wit and instruction, was "The Practice of Medicine as an Art." It will be printed in pamphlet form at the request of the senior students. At the close of the lecture the usual announcements were made by the registrar and the students dismissed. The regular work of the course will begin at nine o'clock this morning with a lecture by Dr. Hun.—*Albany Morning Express*, Sept. 9.

BULLETINS OF THE NATIONAL BOARD OF HEALTH.

WASHINGTON, D. C., *August* 4, 1885.

The following abstracts from Consular reports just received at this office are furnished for your information. The Board hereafter will receive reports regularly, and you will be furnished promptly will all information received affecting the public health.

Cholera in Spain from March 4, Date of Reappearance, to July 4.

PROVINCE.	CASES.	DEATHS.	PER CENT. MORTALITY
Alicante	1,588	646	40.6
Castellon	2,617	1,277	48.8
Cuenca	78	40	51.3
Madrid	1,700	753	59.2
Murcia	6,007	2,319	38.6
Taragona	31	19	61.2
Teruel	12	5	41.6
Toledo	455	207	45.5
Valencia	14,928	6,851	45.5
Zaragoza	628	280	44.7
Totals	28,044	12,347	

Abstract of Consular Reports.

PLACE.	Week Ending.	CHOLERA.		YELLOW FEVER.		SMALL POX.		REMARKS.
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
Antigua, W. I.	June 29	....	....	....	....	....	....	No epidemic diseases reported.
Cienfuegos, "	June	....	....	....	....	....	..	do. do.
Cardenas, "	July 18	....	....	....	....	....	....	do. do.
CapeHaytien, "	" 18	....	....	....	....	....	...	do. do.
Curacoa, "	" 18	....	...	....	....	....	....	do. do.
Havana, "	" 16	....	....	20	4	....	....	Typhoid fever prevalent.
"	" 22	....	....	22	3	...	....	do. do.
Matanzas, "	" 15	....	...	....	....	....	....	Typhoid fever, one death.
"	" 22	....	....	....	....	....	....	Intermittent fever prevalent.
Nassau, "	" 18	....	....	...	....	....	....	Intermittent and bilious fever.
*St. Thomas "		....	....	....	....	....	..	....
Laguayra, Venez.	" 18	....	....	....	....	....	....	No epidemic diseases reported.
Alicante, Spain.	" 11	....	....	....	....	....	....	Port & city healthy, cholera in Province
Lisbon, Portugal	" 9	....	....	....	....	...	2	....
"	" ..	....	....	....	....	....	6	.. ..
Paris, France...	" 4	..	....	....	....	43	4	....
"	" 18	...	....	....	....	41	1	Typhoid fever, C. 199; D. 38.
Bordeaux, " ...	" 11	....	...	....	....	....	2	....
London, England	" 11	....	....	....	....	101	21	Diarrhœa, 113 D.
Trieste, Austria.	" 4	....	....	....	....	....	3	Diphtheria prevalent.
Valencia, Spain.	" 11	1747	964	....	....	....	....	Epidemic spreading but less virulent.
Venice, Italy....	" 4	....	...	....	....	....	5	....
Bombay, India..	June 23	....	2	....	....	....	....	General sanitary condition good.

* Four deaths from yellow fever among soldiers in garrison prior to May 1, when detachment was removed; no cases since. June 23, quarantine established.

ALBANY
MEDICAL ANNALS:
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CLINICAL CONTRIBUTIONS TO OBSTETRICS AND GYNECOLOGY.

BY JAMES P. BOYD, M.D., ALBANY,
Professor of Obstetrics and Diseases of Women and Children, Albany Medical College.

[FOR ALBANY MEDICAL ANNALS.]

CASE I.—*Sponge Tent Remaining Eight Days in the Uterus.* August 11, 1883, Dr. John Swinburne asked me to see a patient with him,who had arrived the day previous from a distant part of the state. The history which he gave me as we rode to the house of the patient was as follows:

The patient had been brought to him by her physician, who stated that she had suffered from menorrhagia and metrorrhagia for many months. She complained also of pain in the lower part of the abdomen, and had lost strength. After treating her for a time without benefit, he determined upon a thorough examination of the cavity of the uterus, as he suspected that the hemorrhage was due to a growth situated above the os internum. Accordingly he introduced a sponge tent of medium size, and, this not answering his purpose, he waited a day or two and then inserted a second tent. This was done in the evening. Calling the next morning for the purpose of removing the tent, he was astonished to learn that it had dropped out. The patient stated that a number of clots had been expelled from the vagina, and, with them, the tent. A vaginal examination revealed the fact that the cervical canal was well dilated as far as the os internum; at this point, however, owing to the insufficient dilatation, nothing of importance was discovered. The next day the discharge, which still continued, began to be offensive, and the physician became alarmed, fearing that the tent might have been retained, notwithstanding the assertions of the patient. As the discharge continued, and as the patient now began to suffer from chills and fever, it was decided to bring her to Dr. Swinburne for advice. On reaching the house we found the patient sitting up and anxious to see us. She looked strong and vigorous. Dr. Swinburne and I examined her. We found the uterus enlarged. The sound entered a distance of a little over three inches. A finger could be passed as far as the os internum without difficulty. The examination was not satisfactory, and I decided upon a second visit in order to clear up the mystery. Dr. Swinburne asked me to take charge of the case. Returning soon after with suitable instruments, I dilated the cervical canal with Ellinger's dilator, and then passed my finger up to and through the os internum, when I immediately detected the sponge tent. With an ordinary uterine dressing forceps I seized the tent, which was fully expanded and very offensive, and without much difficulty removed it. Whilst removing the tent I discovered a growth attached to the fundus uteri. After the removal of the tent the uterine cavity was washed out with hot carbolized water. Cotton soaked in pure carbolic acid was applied to the mucous membrane of the uterine cavity, and the patient was instructed to remain perfectly quiet in bed. Hot water injections were ordered for the vagina every four hours. Quinine was also prescribed. A few days later the patient felt well enough to return home. The discharge had ceased. A few weeks later she returned to be treated for the uterine tumor, all the bad effects of the sponge tent having completely disappeared.

Case II.—*Uterine Hydatids.* Mrs. M., 35 years of age, multipara, entered St. Peter's Hospital, June 16, 1884, with the following history: Until about three months before her admission to the hospital she enjoyed good health. At that time, when she supposed that she was three months pregnant, a profuse hemorrhage from the vagina occurred, accompanied by severe abdominal pain, and she was confined to her bed. Her health gradually failed after this, and she suffered from nausea and vomiting. There were occasional hemorrhages, but not profuse. When I saw her in the ward of the hospital she looked pale and emaciated. She had not been able for many days to retain any food. The pulse was about 100, the temperature normal. Examination of the abdomen enabled me to appreciate the size and relation of the uterus. The uterus was considerably enlarged, and reached to the umbilicus. Vaginal examination did not reveal any thing of special importance, beyond the fact that the cervical canal was dilated sufficiently to permit of the introduction of a finger as far as the os internum. There was obscure fluctuation in the uterus. Nothing resembling a child could be detected by abdominal palpation. Heart sounds were absent. The sign of ballottement was not present. After trying many remedies for the vomiting, without avail, I advised the house physician to administer milk and beef tea by the rectum. For a week the nutrient rectal injections were employed. At the end of a week the patient was able to retain peptonized milk in the stomach. The rectal injections were omitted, and before leaving the hospital the patient was able to retain considerable food. At her own request she was permitted to leave the the hospital. Two or three weeks later her husband came to my office and informed me that she had suddenly experienced severe pain in the abdomen, began to flow profusely, and before a physician could be summoned expelled a large number of cysts. The patient recovered. During the time that this patient was in the hospital there was no hemorrhage, and the vaginal discharge did not exhibit any important features.

CASE III.—*Sloughing Polypus of the Uterus—Septicæmia.* Mrs. J., 25 years of age, came to the Albany Hospital, September 12, 1883, complaining of an offensive discharge from the vagina, which had lasted about five weeks. The patient was very much exhausted at the time of admission to the hospital, and informed me that a miscarriage was the cause of her sickness. She suffered from chills and night sweats. At the time of my visit the temperature was 103° F., and the pulse 110. On examination a tumor, dark in color and friable, was discovered extending from some point above the os internum to the vulva. Ether was administered, and when the patient was under its influence a Sims speculum was introduced, and the uterus was pulled down by a strong tenaculum fixed in the cervix. Knowing the friable nature of the growth, and desiring to remove it entire, I passed a large-sized curette up to the fundus uteri, and severed the pedicle at that point. The curette was then thoroughly applied to the uterine cavity and a large number of fragments of broken-down tissue removed. Pure carbolic acid was applied with absorbent cotton to the diseased mucous membrane of the uterus. On the evening after the operation the temperature was about normal and the pulse 80. Injections of hot carbolized water were ordered for the vagina. The patient rapidly recovered, and was discharged cured from the hospital one week later.

CASE IV.—*Fibroid Tumor of the Uterus.* June 12, 1885, I was asked by Dr. Southworth to see Mrs. S., who had been suffering for some time from uterine hemorrhage. The patient was thirty-nine years of age, had been married nineteen years, and had two children. She had suffered from the effects of two miscarriages. For six months her health had been much impaired, owing to menorrhagia and metrorrhagia. She was very pale. The pulse was rapid and irregular. There was œdema of the legs, and the slightest exertion caused dyspnœa. Vaginal examination revealed a fibroid tumor attached to the uterus by quite a large pedicle. On June 15, 1885, I operated on the patient, assisted by Dr. Southworth. Fixing a strong vulsellum forceps in the tumor, I pulled it down as far as I could and slipped the twisted wire of the ecraseur over it and as far along the pedicle as possible, and then tightened the wire. The tumor was removed without difficulty, and weighed about four ounces. About one hour after the operation a large amount of watery fluid escaped from the vagina. The patient recovered, and the hemorrhage has ceased.

CASE V.—*Face Presentation.* In the month of July, 1878, I received a note from a physician stating that he had attempted several times to deliver a patient with forceps, without success, and requesting my assistance. On my arrival at the house of the patient I learned that she had been in labor thirty-six hours. The patient was a multipara about 28 years of age and of slight physique. I was informed that the membrane had ruptured, that the cervix was fully dilated, and that the child was dead. A vaginal examination soon convinced me of the fact that the face of the child presented at the superior strait. The chin was near the left sacro-iliac synchondrosis. The patient was placed in the usual obstetric position, and ether was administered. I slowly inserted my hand in the vagina and grasped the head of the child. Assisted by a hand on the abdomen of the woman, I succeeded without difficulty in converting the face into an occiput presentation. Immediately after the reposition I applied the Vienna forceps and speedily delivered the child. The patient recovered.

Case VI.—*Breech Presentation—Retained Head—Death of Mother and Child.* About 9 o'clock one evening in November, 1884, a messenger came to my office with a note from Dr. Reilly, of Greenbush, asking me to come at once and meet him in consultation. The messenger proved to be the husband of the patient. From him I learned as we walked along that his wife had labor pains in the morning, and that they had sent for the midwife who had attended her in six confinements. Every thing seemed to be favorable until the afternoon, when, although the pains seemed to be strong enough, no advance was made. Some time during the afternoon the midwife managed to deliver the breech, but was unable to deliver the head, and after long-continued efforts had informed the anxious friends that it would be necessary to summon a physician. Dr. Reilly was called, and on reaching the house found the patient apparently in a state of collapse, He immediately sent the husband for me, and proceeded to administer a hypodermic injection of whiskey. When I reached the house, one glance at the patient convinced me that there was no hope for her. The skin was cool and bathed with a cold sweat. The pulse could not be counted. The patient was conscious. Having informed the friends of the desperate nature of the case, I proceeded to deliver the child. I found the child's body lying between the thighs of the mother. The abdomen of the child was exposed as I removed the coverings of the bed. Passing my hand over the abdomen of the child, I found the face under the symphysis pubis. The arms were stretched out alongside the head. The body of the child was turned easily, the arms delivered, the face rotated backwards to the sacrum and the head delivered. The operation did not occupy four minutes. The placenta came away readily. Half an hour afterwards the patient was dead. I was unable to obtain an autopsy. The sudden collapse I think was due to rupture of the uterus.

Freckles.—℞. Hydrarg. amm. mur., 3.75 gms.; Magist. bism., 3.50 gms.; Ung. glycer., 30. M. S. Apply every other night for four to six weeks.—*Med. News.*

NASAL POLYPI REMOVED—RECOVERY AFTER EXTENSIVE ABSCESS.

BY W. E. ROGERS, M.D., REXFORD FLATS, N. Y.

[FOR ALBANY MEDICAL ANNALS.]

Mrs. Groom, mother of Mrs. A. S. Garnsey, of Clifton Park, is 80 years of age, and for several years past has had an enlarged parotid gland on the right side, about the size of a goose egg. The size of the gland was variable and soft to the touch. Within a year past the breathing has been obstructed through the nose, and increasingly so, until she failed entirely to breathe through the nasal passage. In consequence of this obstructed breathing the tongue and fauces became dry and cracked, the sleep interfered with, and the general health seriously impaired.

I was called to see her in May last. I discovered that the nasal passage was completely occluded by polypous growths; the right tonsil much enlarged and encroaching upon the posterior nasal passage.

I removed all the polypoid growths in the anterior nasal passage that I could reach, but as no relief followed, Dr. Norman L. Snow, of Albany, was called. He came June 8, and succeeded in removing all the polypoid growths of the entire nasal passage, and also extirpated the enlarged tonsil. The lady endured the severe operation remarkably well, and derived much immediate relief from it. In a few days, however, the passage became entirely closed up again and apparently worse than before. The nose swelled to twice its natural size; the lachrymal ducts became stopped up; abscess of both sacs followed; the lady's sufferings greatly increased, and herself and family were discouraged.

Warm poultices were applied over the abscesses. I then commenced the use of Swift's vectores of iodoform and tannin. I passed the vector up the nostril as far as I could anteriorly, and then with the finger applied the ointment posteriorly in the nasal passage. Improvement soon commenced. The vector was applied daily, and the improvement went on rapidly, until to-day the nasal passage is fully open.

The abscesses burst into the nasal passage and discharged copiously. The polypous growths are all gone, and the enlarged parotid gland is gone also. The old lady breathes perfectly well, and has wonderfully improved in looks and feelings. To us all the result is astonishing.

The old lady is full of gratitude, and is more than ever assured that "all things work together for good to them that love God."

ABSTRACTA.

Water Purified with Alum.—Those of our readers who have traveled on the Mississippi River know how turbid the water is; and they may have seen people tie a bit of alum to a thread, let it down into a tumbler of the water, and swing it about a little, after which operation the liquid becomes as clear as crystal.

In 1865 Jeunet (*Moniteur Scientifique*) found that four-tenths of a gram of alum to a liter of water (about twenty-three grains to the gallon) rendered it drinkable in from seven to seventeen minutes, even when it was quite full of foreign matter.

Recently Professors P. T. Austen and F. A. Wilder, of Rutgers College, find that two-tenths of a gram to the liter (one and one-fifth grains to the gallon) caused the separation and settling of the impurities in the New Brunswick, N. J., water. This amount of alum is too small to be perceptible to the taste, or to exert any physiological action.

The alum may also be used in clarifying water by filtration. If a very small amount be added to turbid water, it can be filtered through ordinary paper without difficulty, and yields a brilliantly clear filtrate, in which there is no trace of suspended matter. It is not necessary to let it stand before filtration, as the action of the alum is immediate.

The simplest form of filter for considerable quantities of water is a tube, one end of which is stuffed with cotton. A drain-pipe is the best, as it can be so easily cleansed. The plug of cotton should be two or three inches thick, and may be kept in place by a ring of wood fitted into the bottom of the pipe. Make a solution of half an ounce of alum in a cup of boiling water, pour this into a quart measure, and fill up with cold water. Fifty-four drops of this solution will contain two and three-tenths grains of alum, which is the quantity for a gallon of water. It is not important to be very exact, as twice the quantity would be harmless enough; in fact, Jeunet's rule would call for about ten times as much.

Analysis shows that the water is not only clarified but purified by this process, the greater part of the organic matter being removed from it.—*Popular Science News.*

Cause of Corneal Opacity following Instillations of Cocaine.—Dr. J. Craft, of Cleveland, O., offers an explanation of the evil results sometimes observed to follow the continued employment of cocaine after operations upon the subconjunctival tissues. He recalls the fact that the drug acts not only as a local anæsthetic, but also as an excitant of the vaso-motor nerves, causing a marked depletion of the vessels of the part. "Now I can readily see that in an operation upon an eye in which the conjunctiva is healthy and its vessels scarcely discernable, this second action might be overlooked. And the repeated application of cocaine, to relieve any pain subsequent to the operation, might occasion such absolute depletion of the vessels as to produce turbidity, and finally even necrosis of the cornea from lack of nutritition. Atropine instilled into the eye reverses this state of affairs; vaso-motor irritability is overcome, reaction ensues, and the turbidity of the cornea clears up. Such, I conceive, from my experience with cocaine, is the cause of the unpleasant effects recently reported." Dr. Craft suggests that the artificial production of anæmia may be prevented without impairment of the anæsthetic effect, by the addition of a little atropine to the cocaine solution.—*N. Y. Med. Record*, July 4—*The Aanalectic.*

The Alcoholic Prohibition Question.—We cannot conscientiously go so far as many enthusiasts, and ask for the total prohibition of the manufacture of whiskey, brandy, wine, beer, etc. These things, if they have no other use, are too valuable for medicinal purposes to wish their manufacture and sale prohibited by law. But laws can be so framed as to close up barrooms, wine and beer gardens, etc., if need be, or else permit them to exist under such stringent regulations as to deprive parties of pleasure in frequenting such places for alcoholic indulgences. "Social drinking" is the principal cause of drunkenness.

We do not propose here to suggest the exact legislation needed in given cases. We simply desire to remark upon the propriety of remitting such questions to the State Board of Health to frame suitable wholesome laws for adoption by state legislatures, looking to the suppression of the enormous vices entailed upon body and mind by abuses of alcoholic indulgences. Drunkenness and other alcoholic disorders or diseases are assuredly preventable, and their prevention is a subject for the especial consideration of boards of health, regardless of political parties or principles. If boards of health have the right and power to remove the causes of other preventable diseases, they should have the right to remove the *chiefest* cause perhaps of preventable disease — abuses of alcoholic drinking. Alcoholic diseases are undoubtedly preventable. None will deny this.— *Virginia Medical Monthly*, August, 1885.

Dermatology.—The *Journal of Cutaneous and Venereal Diseases* contains an article by Dr. Putnam, of Binghamton, N. Y., summarizing the recent advances in cutaneous therapeutics, from which we glean a few practical suggestions.

The oleates, valuable remedies added to our therapeutics within recent years, are strongly advocated, especially by Dr. Shoemaker, of Philadelphia. It is claimed they possess over the ordinary ointments the following advantages: Their deep penetration, freedom from rancidity, cleanliness of application, antiseptic and deodorant properties. The oleates of copper, mercury, bismuth and zinc are those in more common use; the oleate of copper in ringworm and in the removal of freckles; oleate of mercury inunction treatment of syphilis and the various parasitic diseases; the oleate of bismuth in rosacea; and zinc oleate in vesicular eczema and excessive local sweating.

Other useful remedies, especially in the moist cutaneous diseases, are the medicated powders, recently brought to the notice of American dermatologists by Dr. Faithful, of Australia. The powders are very simply prepared. The remedy to be used is first dissolved in alcohol, ether or chloroform, and the solution then mixed with starch or French chalk. After evaporation, without the aid of heat, a fine medicated powder remains. In this connection we recommend as useful "Anderson's Dusting Powder," composed of a drachm and a half of camphor, half ounce of zinc oxide and one ounce of starch. These medicated powders are more especially useful in the moist skin diseases, as vesicular eczema, herpes, ulcer, chafing, etc.

In psoriasis, the bromide of arsenic internally and chrysarobin pigment externally are recommended by Dr. Corlett, of Cleveland, O. For the same affection, Dr. Greene, of Christiana, recommends the iodide of potassium, in doses ranging upward, from ten to fifteen grains twice or three times a day; Dr. George H. Fox, a two to five per cent. solution of salicylic acid in castor oil. Dr. F. also proposes for psoriasis the following prescription:

℞.	Chrysarobin........	10 parts.
	Salicylic acid.......	10 "
	Ether...............	15 "
	Flexible collodion to	100 "

This combination does not produce the staining of the skin, injury to the clothing and, in some instances, the dermatitis, which most of those who have used the chrysophanic acid must have observed.

In acne vulgaris, Dr. Piffard, of New York, recommends the bromide of arsenic in 1-100—1-50 grain doses, twice or three times a day.

In eczema marginatum and in ringworm in general, Dr. R. W. Taylor, of New York, recommends a solution of the bichloride of mercury in the compound tincture of benzoin, or any gum resin, in the proportion of two to four grains to the ounce. The resin holds the bichloride in contact with the diseased skin.

In eczema—reported in connection with a case of eczema of leg—Dr. Morrow, of New York, suggests a gelatin plaster, composed of one part of glycerine, four of gelatin, and eight of water, medicated with ten per cent. of oxide of zinc and one per cent. of carbolic acid. This plaster may be spread on muslin and evenly applied to the inequalities of the surface.

Observations are being made on the dermatological uses of the hydrochlorate of cocaine. This last promises to be a most useful agent in the therapeutics of cutaneous diseases.—*New Orleans Med. and Surg. Journal.*

Calomel Hypodermatically in Syphilis.—In the *Vierteljahrschrift f. Dermatologie und Syphilis* a report is made by v. Watraszewski of seventy cases of recent syphilis treated by subcutaneous administration of calomel. The amount used in each injection was 0.1 grm. of calomel suspended in mucilage. Only in a few instances was double the above amount administered. The injections were made in the gluteal region, at intervals of seven, ten, to fifteen days. The interval is determined by the degree of stomatitis developed. As a rule, three injections sufficed to cause all manifestations to disappear. A fourth injection was, however, generally made. The seventy patients got, all in all, 257 injections. Only four abscesses developed. It is deemed advisable to direct complete rest for several days after the procedure.— *Weekly Medical Review.*

TINEA VERSICOLOR, OR LIVER SPOTS.—Velminckx's solution: Quicklime, half and ounce; flowers of sulphur, one ounce; water, ten ounces. Boil to six ounces, and filter. Perfume with anise. Use the solution diluted with four to eight parts of water, dabbed on the patches after a bath with soap and water.—*Med. and Surg. Reporter.*

TINEA CAPITIS.—Ladriet de Lacharriére used croton oil, as proposed by Dr. Alden Smith some years ago, on several hundred patients with good results. Vegetal parasites, in mild cases, are successfully treated with borax, carbolized oil, thymol, naphthol, etc. Mercuric bichloride, with glycerine as a vehicle to prevent absorption, acts well on the surface.—*St. Louis Med. and Surg. Journal.*

FRECKLES.—Borax Lotion.—Citric Acid Crystal or Solution.—Dr. J. V. Shoemaker: Carefully apply at night a small amount of the ointment of oleate of copper, prepared by dissolving one drachm of the salt in sufficient oleo-palmitic acid to make a soft ointment.—Dr. Duhring: Apply night and morning, until slight desquamation, a solution of one to three grains of mercuric bichloride to the ounce of water, or of emulsion of almonds.—A writer in the *Pharm. Zeitung* says that a wash consisting of equal parts of lactic acid and glycerine will do the work, and is harmless when applied to the skin.

PERRY'S MOTH AND FRECKLE LOTION (Paul E. Fiquet, St. Louis, in answer to a query in *National Druggist*) is a colorless liquid, with a little white sediment, and, according to Prof. Chandler's analysis, the solution contains: Bichloride mercury, 0.72 per cent.; sulphate zinc, 0.85 per cent. The sediment was found to contain very small quantities of mercury, lead and bismuth. (Hager's Pharmaceutical Praxis.)

FRECKLES may be considered under two heads — the so-called "summer," or temporary variety (*ephelis*), and the permanent kind (*lentigo*). Both are commonly stated to be simply morbid alterations of the skin-pigment, and to be situated solely in the *rete mucosum*, but this is not absolutely true, inasmuch as *ephelis*, properly so-called, is generally due to a darkening of the under surface of the epidermis, either in small or ovoid patches ("summer freckles") or extended over a large surface ("tan," or "sunburn"), while with *lentigo* the brownish discolorations are at a greater depth, and remain *in situ* after the covering epidermis has been completely removed. Strong sunshine, or any powerfully actinic light, and radiant heat from any source are apt to produce the first-named, and to enhance the latter form of the skin's chromatogenous function, the manifestations of which vary greatly according to individual idiosyncrasies.

Similarly, the treatment which answered best for some persons is not so efficacious in other cases, but the old adage that "prevention is better than cure" applies here with considerable force, and, as regards the *rationale* of remedial applications, it may be said in general terms that the applications in the right place of the active reducing or de-oxydizing agents is, as a rule, successful in removing *ephelis* altogether, and in greatly toning down the shade of *lentigo*. Commencing with the mildest form, we will give a good formula for a

SUN-BURN LOTION.

℞. Citric acid	ʒ i.
Sulphate of iron	gr. xviii.
Camphor	q. s.
Elder flower water	fl. ℥ iii.

The sulphate of iron must be in clear green crystals, unless the "granulated" form, which is preferable, be available, and in either case the salt should be free from oxidized portions, or "rustiness;" it should be dissolved in half the elder flower water (all of which is better, if not quite recently distilled, for being quickly raised to the boiling point and cooled out of contact of air before use), the citric acid being also in solution in the other half, and the two fluids mixed, filtered if necessary, and bottled immediately, a lump of camphor about the size of a small peppercorn to be added to the contents of each bottle.

HYDROKINONE WASH FOR THE SKIN.

℞. Hydrokinone	gr. xlviii.
Glacial phosphoric acid	gr. xxx.
Glycerin	fl ʒ ii.
Distilled water	fl ℥ iv.

These two lotions are stated to give excellent results, especially the latter. They are to be applied to the skin of the face, etc., in the usual way, at least twice in the course of twenty-four hours, after it has been washed and dried carefully. If the skin be of the nature known as "greasy," a preliminary wash with tepid water containing a few drops of ammonia is advisable.

ADBADERMINE NO. 1.

℞.	Iodide of potasium	ʒ ii.
	Iodine, pure	gr. vi.
	Glycerin	fl. ʒ iii.
	Infusion of rose	fl. ℥ iv.

Dissolve the iodide of potassium in a small quantity of the infusion and a dram of the glycerin; with this fluid moisten the iodine in a glass mortar and rub it down, gradually adding more liquid until complete solution has been obtained; then stir in the remainder of the ingredients, and bottle the mixture.

NO. 2.

℞.	Hyposulphate of sodium (*thiosulphate*)	℥ jss.
	Rosewater	O. i.

Dissolve and filter.

With a small camel's hair pencil or a piece of fine sponge apply a little of Albadermine No. 1 to the tanned or freckled surface, until a slight, but tolerably uniform, brownish-yellow skin has been produced. At the expiration of fifteen or twenty minutes moisten a piece of cambric, lint, or soft rag with No. 2 and lay it upon the affected part, removing, squeezing away the liquid, soaking it afresh and again applying until the iodine stain has disappeared. Repeat the entire process thrice daily, but diminish the frequency of the application if tenderness be produced. In the course of from three or four days to as many weeks the freckles will either have disappeared entirely or their intensity will be very greatly diminished. "Summer freckles yield very speedily to this treatment.

ANTI-FRECKLE LOTION.

℞.	Bichloride of mercury	gr. xii.
	Hydrochloric acid, c. p.	ʒ iii.
	Bitter almonds	℥ jss.
	Glycerin	fl. ℥ i.
	Tincture of benzoin	fl. ʒ ii.
	Orange flower water	q. s.

Dissolve the corrosive sublimate in three ounces of the orange flower water, add the hydrochloric acid, and set aside. Blanch the bitter almonds, and bruise them in a Wedgwood mortar, adding thereto the glycerin and using the pestle vigorously; a smooth paste is thus obtained. Then add gradually about nine ounces of the orange flower water, stirring constantly, continuing the operation until a fine, creamy emulsion is the result. Subject this to violent agitation—preferably with the aid of a mechanical egg-whisk—and allow the tincture of benzoin to fall into it the while, drop by drop. Then add the mercurial solution, filter and make up the whole to the measure of one imperial pint with more orange flower water.

BISMUTH OINTMENT FOR FRECKLES.

℞. Subnitrate of bismuth.... ʒ iii.
Simple ointment......... ℥ ii.
Make an ointment.

Apply to face, etc., at night, and remove in the morning with a little cold cream previous to washing.

COPPER OLEATE FOR FRECKLES, ETC.

This is a much more effective and reliable ointment for the purpose than the preceding, which is really only suited for the milder form of sunburn, while the oleate of copper will remove the more persistent and obstinate *lentigo*. It is thus prepared:

℞. Oleate of copper.............. ℥ i,
White petroleum (Burgoyne's) ℥ iii.
Incorporate thoroughly without heat.

This is to be applied in the same manner as the preceding, washing the surface of the skin, however (after the cold cream), about every third morning, with a little weak ammonia water, in order to prevent any inadvertent accumulation of copper.

The very deep-seated *lentigo*. The only method is the complete removal of the epidermis of the part and of the upper portion of the *cutis* also. A Turkish bath is often used as a preliminary for an effort of this kind, which, of course, needs the application of some disorganizing substance. Permanganate of potassium answers in this direction, but we find that a moderately strong solution of Mr. H. B. Condy's new disinfectant—the permanganate of aluminum—is undoubtedly the best of the two for this purpose. It should be applied several times, until the skin has acquired a uniform brown tint. At from one to twelve hours after this is noticed, it should be removed by a warm and dilute solution (about eight or ten per cent) of hydrochloric acid, to which a little glycerin may be added to prevent too rapid drying. Still better, however, is nitric acid, which, if "painted" upon a colored spot of this kind, first renders it more distinctly yellow, and then orange-brown. In a day or two this becomes a deeper brown, and more or less disorganized, cracking, either round the edge or right across the centre, so that it can be readily peeled away. Freckles removed in this manner rarely crop up again—in that particular place, at all events. In this connection, it is a somewhat curious fact that whereas dilute nitric acid often causes soreness and irritation when applied in this manner, a stronger acid does nothing of the kind, but quietly and quickly "deadens" that portion of the outer covering it has been applied to, so that in a day or two it can be removed quite painlessly. What is known as "French Nitric Acid," of from 1.330 to 1.350 specific gravity, is very appropriate for this purpose.

COCAINE-NITRIC ACID FOR MOLES, ETC.

The mole should be surrounded by a little "cell" or ring of wax, so that the acid can be applied direct without fear of disorganizing the adjacent skin. As nitric acid by itself sometimes occasions a good deal of smarting; it is better to avoid this by mixing cocaine with it.

℞. Nitric acid (S. G. 1,340)....fl. ʒ i
Cocaine....................gr. vi

This should be kept in a bottle with a good fitting stopper. The end of a glass rod is dipped in, and then cautiously applied to the mole or freckle once or twice a day, and the unsightly spot has its vitality destroyed without pain, being then easily and effectually removed.—*British and Colonial Druggist.*

Cocaine Mydriasis Antagonized.—(Dr. Bradford). Pilocarpine with cocaine produces anæsthesia without altering the pupil or accommodation. Ten drops of a 4-per-cent solution of hydrochlorate of pilocarpine are added to a drachm of a 4-per-cent. solution of hydrochlorate of cocaine in order to make the required agent.—*London Lancet,* Aug. 15th.

Tubercle Bacilli: Microscopical Preparation.—[From a letter by permission]. Amsterdam, Sept. 23, 1885. My dear Dr.:—I send you by mail to-day two slides prepared from sputa received. I found *tubercle bacilli* in considerable number, as you will see by examination of specimens. You will be able to distinguish them quite readily I think with a magnifying power of 400 diameters, though more satisfactorily with 100 or 1,000 diameters. I will enclose also the method I employ, being, as I think, the most simple as well as the most valuable I have found. It is the *Ehrlich* method, a modification of Koch's. In the Ehrlich method aniline oil sol. is used instead of caustic potash to produce the alkaline reaction of the color solution. Then excess of color is removed by passing the specimens through nitric acid solution. This solution (HNO_3) removes all color from specimens with exception of the *tubercle bacillus*, upon which it has no action, thus leaving the bacillus the only prominent colored object in the field of the microscope.

Method of Preparation.—Clean thoroughly object and cover glasses. Spread sputa in a thin layer upon cover glass, then pass cover glass through gas flame (buttered side up) two or three times, or till dry.

Color Solution.—To one part of aniline oil, add three parts of water (distilled)—say 10 c. m., enough when mixed for large number of specimens. Shake solution and filter till clear. To filtrate add 20 to 30 drops of a *saturated alcoholic* solution of fuchsin, methylin blue, or violet. Shake and pour in watch glass; then place already prepared cover glass in same. Heat color solution containing cover glass over gas flame till steam arises. Allow cover glass to remain in color sol. one or two minutes, then remove and place cover glass in 33 per-cent. solution of HNO_3 nitric acid till color becomes quite pale, or about disappears. Then wash in water (the cover glass) to remove HNO_3. Dry between blotters and mount with Canada balsam.

In making preparations from lung tissue, allow the cut to remain over night in color solution. This may also be done to advantage with sputa. Also tissue preparations must remain longer in the nitric acid solution.

The advantage of this method, I think, is the quickness with which preparations are prepared and the certainty of diagnosis, as the nitric acid removes color from everything excepting the bacilli.

Very truly,

E. F. Bronk. [A. M. C., '84.]

Hydroleine is sometimes tolerated by a delicate stomach, which would reject the pure oil or the most carefully prepared emulsion.

Cleaning Slides—A Valuable Discovery.—Old and damaged slides as generally handled by microscopists are a first-class nuisance. Until very recently, I have advised boiling them in concentrated lye, but I have recently hit upon a much better plan. I take a wide-mouthed jar, of sufficient depth, and half fill it with a mixture of gasolin or benzin, spirits of turpentine and benzol. The slides are dropped into this and left over night, or until it is convenient to wipe them. When ready to do this, take out each slide separately and give it a good, hard wipe with a piece of muslin or domestic, and then polish with another clean bit of the same stuff. Slides thoroughly cleaned thus, possess a quality which, in making glycerin or aqueous mounts, is absolutely invaluable. While they are optically and practically clean, such slides retain upon their surface an exceedingly tenuous film of resinous matter that prevents water or glycerin from attaching itself to the surface, and the consequence is that the surplus of such fluid, after a cell is closed, rolls off the slide without moistening it in the least. Cement, on the contrary, attaches itself with extraordinary firmness and evenness. —*National Druggist.*

Cleaning Old Slides.—R. M. Girling, Esq., of New Orleans, has used equal parts of methylic alcohol, oil of turpentine, and benzin. The tenuous film left after wiping, is rinsed off with stronger water of ammonia.—*National Druggist.*

A Case of Congenital Deformity, reported by Dr. Hyde, of Chicago, was attributed by the mother to ante-natal maternal impression, she having been "kicked by a cow" early in pregnancy. It must be that since the cow kicked over the lamp and set the city afire in 1871, untoward results are attributed to the wanton employment of the posterior extremity by the bovine species among the people of Chicago to a degree not usual in other localities.

Hiccough.—A Brazilian physician, Dr. Bamos (*Bull. Gen. de Therap.*) states that refrigeration of the lobe of the ear will stop hiccough, whatever its cause may be. Very slight refrigeration will answer, the application of cold water or even saliva being sufficient.—*N. Y. Med. Jour.*, July 11, 1885.

The hypodermic injection of a quarter of a grain of muriate of pilocarpine is said to be of great value in obstinate hiccough.

FRECKLES.—(Halkin). After the skin has been thoroughly washed and dried, the spots are brushed over once with liquid carbolic acid by means of a small pencil brush which has been dipped into the solution and then expressed. The skin is streched during this proceeding with the fingers of the left hand. It is then left to take its natural course, no washing or removal of the resulting cuticle being permitted. The skin finally regains its normal color.—(*D. Med.-Ztg.*) *Cin. Lan. and Clin.*, Aug. 15.

SALICYLATE OF SODIUM, ten grains four times a day cured diabetes, several cases. Dr. Yarrow, *N. Y. Med. Times.*

ZIZYGIUM JAMBOLAENUM IN DIABETES. These berries, from East Indies, are shorter and thicker than a date seed, grayish-black, hard, and of slightly aromatic flavor. One tablespoonful of decoction three times a day for three days apparently cured an old case of glycosuria. W. H. Burt, M. D., Chicago. *The Clinique.*

DIABETES MELLITUS was cured by removing uterine appendages in a case of pyo-salpinx, reported by Dr. Francis Imlach, *Brit. Med. Jour.*

PARKE, DAVIS & Co. have brought out another new thing,—a materia medica collection for students of pharmacy and medicine, containing specimens of all crude drugs of vegetable origin recognized in the U. S. Pharmacopœia, and many not so recognized that are in common use—in all 128 specimens. Length of case, 23 inches; width, 16 inches; depth, 13½ inches.

The descriptions of text books, even when aided by elaborate engravings, appeal only to the imagination, and the impression received from reading is consequently of necessity imperfect—often misleading and always evanescent. It is not enough, even, that the student have access to cabinet collections, although these render excellent educational service. It is only by having the specimen actually in hand that, with the aid of lens and dissecting needle, he can intelligently follow the descriptions of his manual.

Specimens of many of the common drugs are of course easily procured at any drug store for such examinations, but there are many which are not thus accessible, and it is, moreover, important that the specimens shall be all of unquestionable authenticity.

The present collection furnishes this desideratum. The firm supply these cases at the nominal cost of ten dollars each.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

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JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. OCTOBER, 1885. NO. 10.

WATER SUPPLY.

One of the ways that has been brought to the notice of the Water Commission, for supplying Albany with water, and one which has received serious attention from them apparently, is that by a series of driven wells. By this method Brooklyn obtains a large quantity of water. There seems to be little reason why water thus obtained would not be reasonably pure. It may be a question worth considering, however, whether wells sunk in the flats in the river valley north of the city might not be contaminated from the Rural and St. Agnes Cemeteries. A very large number of burials are taking place in these two adjacent burial grounds on the hills above this point, and it is evident that they must contaminate a considerable drainage area, possibly reaching even to the rather remote region selected for testing the driven wells.

The water question is one of the most difficult to settle. Very few places are being provided with reasonably pure water. Lakelets and open reservoirs are liable to become charged with vegetable and animal matter, and in warm weather will swarm with living organisms; stagnant pond water is always unwholesome; superficial wells in the city limits are to be utterly condemned, for, even if piped or tubular, their joints are never impervious, and without casing up of their sides they are never to be thought of; deep wells should be good if remote from habitations, but they are not free from the risk of contamination by conveyance of nocuous matter from a distance in the strata of the soil; rivers have the safe element of running water, which, under favorable circumstances, would render them comparatively safe, but all rivers receive animal waste matter, and, if small especially, are liable to be the direct medium for propagating disease, so that large rivers, even though more likely to be the receptacles of sewage and the waste from vessels upon them, are probably safer. It is certain that the commissioners will not be able to find perfectly pure water to supply Albany. But it is an ideal body, and they may be relied upon to settle upon the very best.

Meantime, let the people do two things with the water they already have so abundant a supply of—filter it first, then boil it. It can be drunk with impunity then. We refer to the river water, however, not to that which comes from the cess-pool called Tivoli Lake, which even this treatment would hardly purify. It would be interesting if the Board of Health would compare the health of the localities supplied from it with that of other parts of the city. F. C. C.

National Board of Health: Small Pox and Cholera Bulletins:—The National Board of Health Bulletin of Sept. 23 reports the continuance of small pox in Montreal and the occurrence of a small number of cases in several other localities in Canada. From Sept. 10 to 16 inclusive, we believe 164 deaths were reported in Montreal. By order of the Board of Health of that city, reports are withheld as information is not reliable. Twenty-two cases are reported by the U. S. Consul-general in different localities in the provinces of Ontario and Quebec.

Four French refugees have been quarantined in Manchester, N. H.

One case has developed at Little Falls, this State, having been contracted in Montreal.

Reported cases in Troy, emigrants from Naples, by way of New York, have been found erroneously diagnosed, being cases of impetigo.

In Tennessee (reported in Nat. Board of Health Bulletin) one case is reported, that of a government official who has been traveling among the Indians.

Small pox is still prevalent in London, Eng.; 47 admissions to the hospital during the week being reported, and six deaths. The disease also prevails, to a less degree, at several localities on the continent.

In Spain, August 9 to 27 inclusive, 93,119 cases of cholera are reported, with 31,287 deaths. The total number of cases reported from March 4 to August 27, in 214,958, the mortality being, 81,496, showing a mortality rate of 40 per cent. F. C. C.

DR. GEORGE M. STERNBERG IN ALBANY.

Dr. George M. Sternberg, U. S. A., F. R. M. S., the distinguished physician and scientist, made a short visit in Albany, from September 19th to 21st, as the guest of his old friend and former classmate, Dr. O. D. Ball, No. 691 Broadway, Albany.

Dr. Sternberg was on his way as a delegate to the International Sanitary Congress at Rome, Italy, which convenes in November. He had returned to his home in Baltimore from this Congress in July last, after its adjournment for the summer months.

This Congress was called by the Italian government to establish some uniformity among different nations in quarantine regulations. Each government was asked to send a scientific and also a diplomatic representative. Our government, not wishing to seem bound by any action of this Congress, refused to send a diplomatic agent, and sent only a scientific representative, Dr. Sternberg.

During the last year Dr. Sternberg, by request of our government, has devoted his attention principally to the investigation of germicides. He was appointed as one of the members of the National Board of Health at its first organization, and was then detailed as one of the Commission to investigate the Yellow Fever at Havana. In his capacity of Surgeon, U. S. A., he continued his investigations of Yellow Fever in New Orleans. He there translated the work of Dr. Magnin, of Paris, on "Bacteria," which is now published, together with technique and original matter of Dr. Sternberg's, by Wm. Wood & Co. In 1883 he published a work on Malarial Diseases, with original investigations of germs productive of those diseases. He has been the author of many scientific papers which have mostly been published in the *Philadelphia Medical Times*.

His investigations of Yellow Fever at Havana have not yet been published, except a preliminary report which has already reached the profession. As chairman of the Committee on Disinfectants of the American Public Health Association, he has issued the "Preliminary Report on Disinfection and Disinfectants," which has met with much criticism; but, nevertheless, in many respects, is the most original and valuable contribution that we have upon this subject.

Dr. Sternberg lectured before the class of the Albany Medical College, on Saturday, September 19, at 4 o'clock, on the subject of "Germs and Germicides."

On Saturday evening he was entertained at the house of Dr. O. D. Ball, on which occasion a number of physicians of Albany met him socially.

Dr. Sternberg is a pleasing conversationalist. He entertained the assembled gentlemen with accounts of some of his rougher frontier experiences while with Gen. McCook and Gen. Miles in pursuit of recalcitrant Indians, and he held his own under a cross-fire of questionings on many obscure points on the natural history of bacteria and the theories of germ diseases.

He is a comparatively young man; having entered the U. S. Army at an early age, he now stands high up on the list among the Senior Surgeons.

His scientific investigations have made him prominent in professional circles, and he is now well known both in this country and abroad as a scientist and original observer.

Dr. Sternberg sailed by the steamship Etruria, on Saturday, Sept. 26. He will spend some days with Koch in Berlin.

Following are notes by medical student Hoadley, class of '86, A. M. C., of the lecture before the Albany Medical College, by Dr. Sternberg, on

DISINFECTANTS.

The students of the Albany Medical College were especially favored on Saturday, Sept. 19th, by a lecture on Disinfectants by so eminent an authority as Dr. George M. Sternberg, U. S. A. His deductions are derived from series of experiments performed in his own laboratory, and with the utmost care, being especially cautious to sift out every element that might lead to erroneous conclusions.

Dr. Sternberg drew the attention of the students to the fact that there is a wide difference between a Deodorizer and a Disinfectant. That because a substance destroys a bad odor it is not of necessity a disinfectant.

He gave his definition of a disinfectant: "An agent which destroys infectious material."

There are three tests used for disinfectants:

1st. That infected material, after being treated with the disinfectant, will not produce its particular disease.

2nd. If a pure culture of disease germs be treated with a disinfectant, no future culture can be produced.

3rd. The test of practical experience.

Dr. Sternberg then described his mode of obtaining pure culture. For example: a small amonnt of material infected with bacilli anthracis was sent him with the directions: "Inject into a mouse and you will have all the bacilli you need." He did so. Then taking a few drops of the blood of the mouse, he sowed it in a culture medium of chicken broth; from this spores were soon in another tube, and so on. He now has cultures in his laboratory which have passed through hundreds of transfers.

The manner of employing the second test is: Add to a culture tube containing disease germs, an equal bulk of the disinfectant; stand for two hours. A few drops of this sown in a sterilized tube should not produce a culture if the disinfectant is effective.

Speaking of particular substances used as disinfectants:

Chloride of lime, in a solution of four ounces to the gallon, is one of the best oxydizing disinfectants. Of this solution, a quart should be used for every two ounces of stool in typhoid fever or cholera.

Carbolic acid, in a two-per-cent. to five-per-cent. solution, is an efficient disinfectant in the absence of spores, as for instance in disinfecting instruments and the hands, and washing the surface of the body.

Mercuric bi chloride is one of the best disinfectants in a solution of from 1-2,000 to 1-3,000, being effective in Dr. Sternberg's experience in a solution of 1-10,000.

Sulphate of iron is a deodorizing agent and will prevent putrefaction, but is not a disinfectant.

Sulphate of copper in a two-per-cent. solution is a reliable disinfectant in the absence of spores.

Chloride of zinc is a better disinfectant than either the sulphate of iron or sulphate of copper.

Any vapor in order to be a good disinfectant must be sufficiently dense to become irrespirable.

OBITUARY.

Dr. Thomas C. Durant.

Saratoga, Oct. 5.—Dr. Thomas C. Durant, principal owner and general manager of the Adirondack Railway, died at his home in North Creek, Warren Co., N. Y., at 3:30 o'clock this morning. He was taken ill on Tuesday last, and his malady developed into peritonitis, which caused his death. The funeral will take place at North Creek on Thursday, and the remains will be conveyed to Greenwood Cemetery, Brooklyn, for interment.

Thomas C. Durant was born in Lee, Berkshire County, Mass., in 1820. His father, Thomas Durant, was a merchant and manufacturer, and his grandfather, William Durant, was an officer in the Revolutionary War and a member of the Boston Committee of Safety. At an early age he selected medicine and surgery as his profession, and he accordingly entered the Albany Medical College, and was graduated therefrom with full honors at the age of twenty. [class of '40.] After practising but three years, he became a partner in the shipping firm of Durant, Lathrop & Co., of Albany. The business of this house was extensive, having branches in Boston, Chicago and New York, with numerous agents at different points. Besides owning and employing a large number of vessels for the transportation of merchandise, Dr. Durant had special charge of the New York branch, and shipped very largely to all the principal European ports. The business was carried on with unexampled success until the breaking out of the French Revolution in 1848. Previous to that time the foreign demand for cereal productions had been great, and the shipments of Durant, Lathrop & Co. were enormous.

The knowledge of the resources of the great West, attained in the course of his mercantile career, made Dr. Durant an earnest advocate of internal improvements, and induced him to turn his attention to railway matters. He assisted materially in promoting the interests of the Michigan Sorthern Railroad, and was the principal contractor in constructing the Chicago and Rock Island, and the Mississippi and Missouri Railroads. Several years previous to the organization of the Union Pacific Railroad Company, under the charter passed by Congress in 1862, Dr. Durant, in connection with persons with whom he was engaged in constructing railroads in Illinois and Iowa, caused preliminary surveys to be made up the Platt Valley; and in 1863 (also prior to the organization of the company), he, at his own expense, sent several corps of engineers to examine the country and make surveys of the route, beginning at Omaha and other points on the Missouri River, and embracing the line through Cheyenne Pass and Bridge's Pass into the basin of the Great Salt Lake. Dr. Durant also, at the same time, sent out a geologist for the purpose of ascertaining the mineral resources of the country. In

1863 he was active in procuring the subscription of two million dollars of stock, which was required by the act of Congress before the company could be fully organized. Having from the surveys and examinations previously made obtained a knowledge of the obstacles to be surmounted in constructing the railroad, he devoted the winter of 1863-'64 to obtaining importaant mendments to the charter, which doubled the land grant and made the company's mortgage bonds a lien upon the road; and during the year 1864 he perfected the financial organization under which the work was carried on to completion, and immediately after laying the last rail on the Union Pacific Railroad, Dr. Durant retired from active relations with the company and soon afterward had begun the construction of the Adirondack Railway, of which he was, until his death, president and general manager. He was frequently in New York city, where this company had an office, and was widely known here.

About two years ago Dr. Durant was prostrated with pleurisy, and for an extended period his life was despaired of. Since then he has spent his winters south. He leaves a wife and daughter at North Creek, and a son, W. W. Durant, whose home is in Saratoga.—*N. Y. Daily Tribune*, Oct. 6th.

BOOK NOTICES.

The Technology of Bacteria Investigation. By Charles S. Dolley, M.D. Published by S. E. Cassino & Co., Bostont 1885.

This book of 250 pages will prove very convenient to those who are engaged in working in bacteria investigation, presenting as it does the salient points in a very clear and concise manner. The arrangement of its subjects and the admirable classification of its contents add to its usefulness.

Under the heading of "Microscopical Preparations" is found the methods of the various investigators, and under "Culture Experiments" one finds a very complete list of the various plans pursued by Koch, Pasteur, Tyndall, and many others.

Part II. is devoted to "Special Methods for Investigating Pathogenic Bacteria." Anthrax, cholera, tuberculosis, and very many other infectious diseases, are taken up in regular order and the best methods explained.

Part III. is devoted to "Formulary," and the various reagents and mounting media, etc., etc., are fully discussed.

Following each department is the literature of the subject. This is especially full, convenient and satisfactory.

The great defect, however, of this work is the absence of all illustrations. To one already somewhat familiar with the subject this want is not so apparent, but a student taking up the subject for the first time would, we fear, find it difficult at times to proceed without aid from illustrations, and we are sure that he would be materially assisted by the presence of cuts and explanatory remarks. We trust that, inasmuch as this very important subject is demanding so much attention from the scientific world at present, that in a new edition of this work this defect may be remedied. WM. HAILES, JR.

INSOMNIA; AND OTHER DISORDERS OF SLEEP. By Henry M. Lyman, A. M., M. D., Chicago: W. T. Keener, 1885; pp. 239.

Prof. Lyman has given us not only a very instructive, but an exceedingly entertaining book as well. He treats of the theories of sleep in the first chapter, giving the experiments of Kohlschüter, Strümpell and Mosso, and the hypotheses of Obersteiner, Pflüger and others. Following this come chapters on Insomnia, Remedies for Insomnia, Treatment of Insomnia in Particular Diseases, Dreams, Somnambulism, and Hypnotism. It has an exceedingly full index, a feature which is omitted quite frequently by recent authors, although so greatly prized by students.

JNO. BEN. STONEHOUSE.

INEBRIISM; A PATHOLOGICAL AND PSYCHOLOGICAL STUDY. By T. L. Wright, M. D., Columbus, O.: 1885; pp. 222.

It is of course to be expected that in this early period of the study of inebriety, much that is written will be purely hypothetical, but the wisdom of publishing a book with so few well observed cases, and yet so many words, is certainly questionable.

This criticism is not intended to apply especially to the above mentioned work, but as well to others that have appeared lately. The subject is surely an important one, and the students are presumedly competent, but the profession needs the publication of clinical observations. Knowledge of the "inebriate constitution, especially with reference to the alcoholic proclivity," will be gained in this way, if ever. The book is not without its good points, and those physicians who have not given much thought to the subject may, if they are able tc wade through its extracts and temperance lectures, find food for profitable thought. It is for sale by the author, T. L. Wright, M. D., Bellefontaine, Ohio. Price, $1.25. JNO. BEN. STONEHOUSE.

EPIDEMIC CHOLERA. By A. B. Palmer, M.D. Register Publishing House, Ann Arbor, Michigan. Cloth, $1.00.

Another contribution to a subject which, especially with the waning season, seems trite, will hardly be welcomed perhaps. Still, there is abundance of opportunity next season, if not this, for us to have the disease to face, and doubtless then our interest will be greatly quickened. The little volume of 220 pages by the well-known Professor of Practice at Michigan University will then not come amiss. It may be recommended as a suggestive and valuable book—one of the best of the many contributions of its author to medical literature; for it is intended for professional use entirely. It is the work of a man of experience, whose convictions are based on the observation of two thousand cases seen in three epidemics. A very large amount of space is, however, given to the views of others — a deference that the author has not been much given to, heretofore. The rather worn subjects of history, nature and cause of the disease are quite freshly treated, and will represent the best accepted views of to day. The phenomena of the disease have little new to speak about; the author has, however, before him the latest documents on the subject, and quotes extensively from those issued by the state boards of health, especially of New York and Michigan, and they all contain advice which physicians might well read. The freshness of the book is seen by the fact that quotations are made from the recent articles on cholera in the *North American Review* for August. Nearly one-half the book is taken up with the subject of treatment. Here, as in other parts of the treatise, remote as well as recent history has been ransacked. But the author is characteristically pronounced in his own views. He is not a skeptical nihilist. Most acute diseases, he says, get well if left to themselves, but, uninfluenced by medication, more than half of those attacked by cholera will die, even under the most favorable hygienic circumstances, as shown by statistics. A very useful *résumé* of the literature of treatment occupies several pages, but no attempt is made to consider the suggestions which have appeared of late in the journals, which he well says "range from the expressions of utter nihilism to the opposite of unquestionable confidence in almost absolute specifics. Coming to his own views, he admits the absence of a positive pathology to reveal the nature of morbid actions; but whether the primary impression is upon the ganglionic system of nerves or not, the gastro-intestinal irritation is generally conspicuous, and the indication is to allay it, bearing in mind that to correct the morbid state of the organic nervous system is equally indicated. Opium is, he argues, the great remedy in the earlier stages, but given too freely depresses the nervous system. "Alcohol is seldom useful under any circumstances." Calomel to excite the natural secretion of the liver is exceedingly important. To relieve the obstruction of the circulation he has resorted to blood-letting in a few cases. Less hazardous is dry cupping along the spine and abdomen or ligation of an extremity, sinapism and friction. The author does not claim special novelty of treatment; his discussion upon it, however, will be the more appreciated. The book closes with a chapter on diseases allied to cholera. F. C. C.

THOMAS' MEDICAL DICTIONARY. A Complete Pronouncing Medical Dictionary, embracing the terminology of medicine and the kindred sciences, with their signification, etymology and pronunciation. With an Appendix comprising an explanation of the Latin terms and phrases occurring in medicine, anatomy, pharmacy, etc., together with the necessary directions for writing Latin prescriptions, etc., etc. By Joseph Thomas, M.D., LL.D , author of the system of pronouncing in Lippincott's "Pronouncing Gazetteer of the World," and "Pronouncing Dictionary of Biography and Mythology." On the basis of "Thomas' Comprehensive Pronouncing Medical Dictionary." Philadelphia: J. B. Lippincott Company. London: 15 Russell street, Covent Garden. 1885. 844 octavo pages.

Physicians, generally, might learn something new to them if they should venture to test their pronunciation of their everyday words—such as "abdomen," "albumin," "cerebral," "ecreseur," "hyoscyamus," etc.—by reference to a dictionary of this kind.

Clear print, with heavy letters for the title words, makes this useful volume attractive and easy for the eyes. Etymology has received special attention. Greek and Latin and other foreign terms are introduced wherever needed to show the derivation of words, and a literal translation is given of the Latin phrases, sentences, etc., occurring in the dictionary. When the word at the head of an article is pure Latin, or Latinized Greek, it is marked with an asterisk, to show that it is not a mere derivative from Latin.

The author makes acknowledgements to Mr. William Jacobs in the department of Botany, to Prof. Joseph P. Remington in Pharmacy, to Dr. Albert P. Brubaker, and others.

The Appendix contains much valuable matter on "Prescription Writing," tables of doses, chemical symbols, etc. Four pages are given to carefully prepared French metric-equivalent tables and explanations, which, some people will claim, show the impracticability of the French system. L. H.

PAMPHLETS, ETC., RECEIVED.

New York Cancer Hospital: First Annual Report.

Cholera in Europe in 1884, Supplementary Reports: National Board of Health. Washington, D. C.

Weekly Bulletin of infectious diseases, abstracted from Consular and other reports. National Board of Health, Washington, D. C.

State Board of Health Bulletin, Nashville, Tennessee. Vol. 1, No. 1. Monthly, large 8vo., 12 pp.

"A New Bandage for Fixation of the Humerus and Shoulder-Girdle." By Charles W. Dulles, M.D. From *The Medical News*, August 29, 1885.

Quarterly Bulletin of the Clinical Society of the New Post-Graduate Medical School and Hospital. 226 East 20th street, New York city. $2.00 a year, with colored plates. A large and valuable periodical.

American Rhinological Association. Chas. A. S. Sims, M. D., Secretary, St. Joseph. Mo. Programs of third meeting, to be held at Lexington, Ky., Oct. 6th, 1885.

Cocaine in Hay Fever, by Roberts Bartholow, M. D., LL. D., Chas. E. Sajous, M. D., and others; sent by Messrs. John Wyeth & Brother, Philadelphia.

External Therapeutics of Pulmonary Consumption: Thomas J. Mays, M. D., Philadelphia. From *The Medical News*, Aug. 22, 1885.

The Opium Habit, by F. M. Hamlin, M. D., Auburn, N. Y. From Trans. Med. Soc., S. N. Y., 1885.

"Tabular Statistics of One Hundred Cases of Urethral Stricture Treated by Electrolysis, without Relapse." By Robert Newman, M.D., Surgeon Northwestern Dispensary, N. Y. Reprint from *New England Medical Monthly*.

"Duty of the State towards the Medical Profession." Delivered before the Medical Alumni Association, University of Michigan, June, 1885. By Conrad George, M.D., Ann Arbor, Michigan. Reprinted from the *Physician and Surgeon*, July, 1885.

Complete Laceration of the Perineum and part of the Recto-Vaginal Septum; Resulting from Forceps Delivery. Primary Operation, complicated with Traumatic Erysipelas. By A. B. Cook, A. M., M. D., Louisville, Ky. Reprinted from *Gaillard's Medical Journal*.

The Woman's Magazine for September, illustrated (Esther T. Housh, Editor, Brattleboro, Vt.,) devoted to Home Science, and Woman's Work in missions and other fields, prints an account of the "Louisville (Ky.) School of Pharmacy for Women"—The first one ever established. A wide range of objects is presented in this family magazine in an attractive way. $1 a year; 10 cents a copy.

"Health Statistics of Women College Graduates." Report of a special committee of the Association of Collegiate Alumnæ, Annie G. Howes, chairman. together with Statistical Tables collated by the Massachusetts Bureau of Statistics of Labor. Copies of this pamphlet may be obtained of Miss Marion Talbot, 66 Marlborough street, Boston, Mass. Price, 25 cents.

"Address of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania, to the People of Pennsylvania." Harrisburg, E. K. Meyers, State Printer, 1885. Executive office State Board of Health, 313 S. Fifteenth St., Philadelphia. Members of the Board: E. W. Germer, M. D., Erie, Pa., President; Pemberton Dudley, M. D., Philadelphia, Pa.; David Engelman, M. D , Easton, Pa ; J. F. Edwards, M. D., Philadelphia, Pa.; Rudolph Hering, C. E., Philadelphia, Pa.; J. H. McClelland, M. D., Pittsburgh, Pa.; Benjamin Lee, M. D., Philadelphia, Pa., Secretary.

PERSONALS.

Dr. Albert Van der Veer, of Albany, N. Y., was, in August last, elected to membership in the British Gynecological Association.

Dr. Robert Babcock, '84, has completed his service in the Albany Hospital, and is now practising in Holyoke, Mass.

Dr. J. W. King, '84, is, by succession, senior resident physician and surgeon in the Albany Hospital.

Dr. Fred R. Greene, '84, has removed from Petersburgh, Rensselaer Co., to 628 Central Ave., Albany, formerly the office of the late Dr. Wm. N. Hays, of '75.

Dr. Joseph D. Craig, '84, is resident physician and surgeon, St. Peter's Hospital, Albany, and Mr. Jas. H. Reilly, '86, and Mr. John L. Larkin, '88, are assistants. The retiring residents are Dr. Ralph A. McDougall, '85, and Dr. Silas H. Parks, '85.

L. T. Morrill, M. D., '73, will remove, Oct. 10th, from Georgetown, Colo., to Wichita, Sedgwick Co., Kansas, a place of 20,000 to 30,000 inhabitants. A hospital and medical college are building there this year. Linzee is in the best of health and doing plenty of surgery. F. D. M.

—Dr. Charles A. Gillette ['83], recently of New York, has established an office in this city at the corner of South Salina and Castle streets. Dr. Gillette begins his practice in Syracuse under the best auspices. His ability in his profession is attested not only by the diploma of the Albany Medical College, but by the professors under whom he completed his medical education in New York.—*Syracuse Standard.*

MEDICAL NEWS.

Small Pox in Montreal.—A numerous section of our population, densely and superstitiously obstinate, blinded by prejudice, and following the guidance of a stray false prophet, have for years entirely neglected, or rather refused to accept, that safeguard which science has *proved* to be of value. The consequences have been truly appalling. Since April last some 850 deaths from small pox have occurred! The vast majority of these are French Canadians.—*Canada Medical and Surgical Journal*, Oct.

Rioting has taken place, physicians and members of the Board of Health have suffered violence, and even a poor apothecary, whose sole offense was that of including vaccine virus among the commodities that he kept for sale, has had a like experience. The anti-vaccination bigotry is said to be mostly confined to the French Roman Catholics. If this is the case, it would seem to be nursed more as a pretext for a war of races and of creeds than from any traditional or inherited prejudices, for we have never supposed that the Church of Rome was opposed to vaccination, and certainly the French as a nation have been unsurpassed in its maintenance.—*N. Y. Medical Journal*, Oct. 3.

The death of Sir Francis Hincks of small pox, at Montreal, is a sad commentary on the neglect of the intelligent portion of the community of the well-established means of protection against this loathsome disease. Ignorance and prejudice go hand in hand, and it is not surprising to find a large element in the Canadian city bitterly opposed to vaccination. It is surprising, however, and unaccountable, that this element should receive the direct encouragement derived from the apathy of intelligent citizens in the matter of personal attention to the means of prophylaxis.—*Medical Age*, Sept. 10th.

Total deaths from small pox in Montreal: In April 6, May 10, June 13, July 46, August 239, September 1 to 22 inclusive 524, Sept. 22 to 29, 297; total 1,135.—*National Board of Health Bulletin*, No. 11, Oct. 6, 1885.

Albany College of Pharmacy.—The introductory lecture to the fifth course of lectures in the Albany College of Pharmacy was delivered by Professor W. G. Tucker, M. D., in the chemical lecture room of the Albany Medical College, on Monday evening, October 5, 1885, at eight o'clock.

The Class of '87 at the Medical College last night elected the following officers:

President, H. V. Mynderse, of Schenectady; Vice-president, C. H. Moore, Albany; Secretary, G. H. McMurray, Fort Edward; Treasurer, E. C. Babcock, Saratoga; Historian, F. M. Drury, Broadalbin; Chaplain, E. M. Jones, Berlin; Marshal, W. G McDonald, Cobleskill.

The class, which numbers about 40, will be given a supper by the newly-elected officers this evening at Keeler's oyster house. —*Albany Evening Journal*, Sept. 30th.

No. 1. 9-8-'85.

ALBANY MEDICAL COLLEGE.

Order of Lectures and Clinics, 1885-86.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday	Friday.	Saturday.
9 A. M.	Surgery Dr. Morrow.	Histology and Pathological Anat. Prof. Hailes.	Diseases of Nervous System. Prof. H. Hun.	Histology and Pathological Anat. Prof. Hailes.	Surgery. Prof. Van der Veer	Chemistry. Prof. Perkins.
10 A. M.	Anatomy. Prof. Balch.	Obstet. & Diseases of Women & Child. Prof. Boyd.	Anatomy. Prof. Balch.	Obstet. & Diseases of Women & Child. Prof. Boyd.	Anatomy. Prof. Balch.	Obstet. & Diseases of Women & Child. Prof. Boyd.
11 A. M.	Surgery. Prof. Van der Veer.	Surgery. Prof. Van der Veer.	Medical Clinic. Prof. Ward.	Theory & Practice & Clinical Medicine. Prof. Ward.	Theory & Practice & Clinical Medicine Prof. Ward.	**Surgical Clinic.** Albany Hospital. 11 A. M. to 1 P. M. Prof. Van der Veer Dr. N. L. Snow.
12 M.	Theory & Practice & Clinical Medicine. Prof. Ward.	Theory & Practice & Clinical Medicine. Prof. Ward.	Surgery. Prof. Van der Veer.	Clinic. Skin Diseases. Prof. Curtis.	Ophth'y & Otology, Eye & Ear Clinic. Prof. Merrill.	
3 P. M.	Physiology. Prof. Townsend.	Chemistry. Prof. Tucker.	Physiology. Prof. Townsend.	Chemistry. Prof. Tucker.	Physiology. Prof. Townsend.	
4 P. M.	Materia Medica & Therapeutics. Prof. Bigelow.	Clinic Throat Diseases. Prof. Bigelow.	Materia Medica & Therapeutics. Prof. Bigelow.	Materia Medica & Therapeutics. Prof. Bigelow.	Chemistry. Prof. Perkins.	

Surgical Clinics every Saturday at the Albany Hospital at 11 A. M.
Medical Clinics every Wednesday, at the Albany Hospital at 11 A. M.
Throat Clinic, Tuesday, 4 P. M., and Diseases of the Skin, Thursday, 12 M.
Eye and Ear Clinic every Friday at the Albany Hospital at 12 M.
Clinics at St. Peter's and Child's Hospital. Hours announced hereafter.
Laboratory Classes in Practical Chemistry, under charge of Prof. Tucker.
Laboratory Classes in Normal and Pathol. Histology and Urinary Analysis by Prof. Hailes.

MEDICAL SOCIETY OF NORTHERN NEW YORK.

The summer meeting (thirty-third year) of the Medical Society of Northern New York was held at the Grand Union Hotel, Saratoga Springs, Wednesday, August 12, 1885.

The President, Dr. C. J. Farley, of Fort Edward, in his opening remarks, spoke of the objects sought to be accomplished by the society; the constantly widening fields for investigation which were being entered upon, and which were yielding unequivocal evidences of progress in the development of medical science; and invited members and other physicians to offer reports of cases for consideration, and enter freely into the discussion thereof, in order that the meeting might be made one of practical interest to all present.

DIPHTHERIA.

The first paper, presented by Dr. Farley, summarized, embodied substantially the following statements:

Diphtheria is both a Local and a Constitutional Disease.—Although it is usually at first local as to its origin, it often rapidly develops evidences of constitutional involvement; hence the remedial measures resorted to should be selected with a view of meeting the requirements of the local manifestations, as well as the general systemic defects.

In a practice of more than twenty years I have had opportunity to witness all the varied phases of this obscure and treacherous disease. Its advent in the throat often precedes, by three or four days, any signs of general lesion; yet, even in these cases, I have succeeded best when I used both local and constitutional remedies from the beginning.

It is Contagious.—In my opinion it is both contagious and infectious. I have witnessed instances in which the germs have been conveyed in clothing many miles to places where the disease had not previously been known. On account of its recognized contagiousness I am now more careful than ever before to secure complete isolation of all cases of the disease, which, in my opinion, will save the lives of many children.

Its Prevention.—It has been my custom, for several years past, to give each child thus separated from other children of the same family appreciable doses of *sulpho-carbolate of soda*, a plan which, I have reason to believe, has arrested its progress in families where all the children had been equally exposed to the contagious influences of the disease.

Treatment.—I usually begin treatment by the application to the patches in the throat, with a soft brush, of a solution of *ferric chloride*, *tannin* and *glycerine*. A solution of *potassic chlorate*, *hydrastis can.*, and *alcohol* I recommend for use in the form of a gargle; and in cases where there is much fœtor a solution of *sulpho-carbolate of soda* or *potassium permanganate*.

In some cases I have good results from dry applications of a powder composed of *tannin* and *sulphur*, blown in through a tube.

The internal administration of stimulants and nourishing food from the first I consider absolutely essential; these are mainly *beef-tea*, *milk*, *quinine* and *whiskey*.

The only case of diphtheritic croup I ever knew to recover was treated by *potassium bichromate*, and *whiskey punch*. The child was kept drunk several days until all danger was past.

The doctor reported his experience in several cases showing the benefit of isolation and the treatment recommended.

Dr. Pierce related in brief the history cf several cases of diphtheria, and stated his views at length regarding the ætiology of the disease. He regards the disease a constitutional one, essentially a blood poison, and claimed that when the contamination of the blood progressed more rapidly than the process of nutrition there can be no hope of cure, unless remedies can be made available in arresting the septic condition in its early stage.

He has used *tannin*, *glycerine* and *hyposulphite of soda* in many cases, and with good results, and considers the local application of *potassium chlorate* and *iron* superior to all other modes of treatment.

Dr. French has confidence in a gargle of *potassium chlorate* and *whiskey*. He relies mostly on the different *mercurials* for combatting the local as well as the constitutional dycrasia. He has occasionally found the *cyanide* useful, but does not consider it superior to the *red* or the *yellow iodides*. For nourishment he relies mainly on the use of milk.

Dr. Paine had found *lactic acid* to be the best solvent of the diphtheritic deposit. He had great confidence in *potassium bichromate*, and thought it the most appropriate remedy in a large proportion of cases. He gave it in all stages of the disease, as long as there were any indications of inflammation, with or without a formation of extraneous membrane, in any portion of the mucous membrane of the air passages. He gave *whiskey* in nearly all cases, in doses sufficiently large and frequently repeated to produce its stupefying effects, on the assumption that alcohol had a specific and controlling influence equal to that of any known remedy.

A FATAL RESULT FOLLOWING THE BITE OF A HORSE.

Dr. **French** related in detail the history of a most extraordinary case, in which a man, while harshly punishing a horse, was attacked by the infuriated beast, the animal seizing his right arm at the wrist, which by biting and wrenching was nearly separated from the man's body. The arm was changed almost to an unrecognizable mass; the tissues below the elbow were torn from their attachments, and the bones were broken into numerous small pieces. Within twenty-four hours mortification had set in, a well-defined line at the shoulder indicating the progress of the gangrenous degeneration. The man died thirty-six hours after the injury. Dr. French inquired whether an early removal of the arm would have prevented a fatal result.

CASES OF TETANUS.

Dr. **Farley** described the features of a case of injury of the hand by being crushed while coupling cars, in which tetanus set in seven days after the injury, death occurring on the ninth.

Dr. J. A. **Pearsoll**, of Saratoga, related in detail the history of a case of tetanus occurring in a young man, in which very large doses of *physostigma*, three or four grains of the extract being given hourly, had proved of decided benefit; latterly, however, *chloroform* has more effectually controlled the spasms. The case is still under treatment.

Dr. **Little** stated that chloroform had proved of essential service in several instances; nearly all cases, however, proved fatal.

Dr. **Herman Bendell**, of Albany, read a paper on

ACUTE INFLAMMATION OF THE MIDDLE EAR.

He claimed that the frequency of this disease, especially during the period of infancy and childhood, demands that the importance of early and energetic treatment tending to prevent the disastrous consequences frequently resulting from this common form of aural disease be not underrated. Energetic and prompt treatment will prevent the development of a chronic purulent condition and lessen the danger of partial or total impairment of the hearing power. The beginning of this disease, in a majority of cases, can be traced to the naso-pharynx and eustachian tube, but it also occurs in connection with local influences not affecting the naso-pharyngeal cavity. Every qualified practitioner should be familiar with the course of inflammatory changes in the middle ear, and from the commencement of the disease adopt a plan of treatment tending to control the same in the acute stage. Any symptoms pointing to disturbances in the middle ear during the existence of and convalescence from exanthematous disease should receive prompt attention, and it is advisable that the condition of the ears during the course of acute exanthema be daily examined, and any trophic changes promptly corrected. The observance of precautionary measures will largely assist statistics in recording a lesser number of inmates in our deaf and dumb asylums, and many chronic otorrhœas, with their discomforts and disabilities will be avoided. Early treatment, especially the evacuation of pus from the tympanic cavity, in the aggravated forms of the disease likely to occur in connection with scarlet fever and diphtheria, will prevent structural changes apt to result in partial or total deafness. It is the duty of the physician, in all cases of acute exanthema, to note the condition of the ears, without waiting for the patient or the development of aural symptoms to direct his attention to the seat of trouble. The old saying that "a stitch in time saves nine," is well applied in these cases.

The prognosis of acute inflammation of the middle ear depends upon the severity of the attack and the age and surroundings of the patient. In families where circumstances will permit the employment of competent nurses, where requisite attention to sanitary and hygienic provisions is strictly observed, the prognosis for a termination of the disease, without impairment of the hearing power, is more favorable than in cases where the patient is so circumstanced that the directions of the physician are not or cannot be complied with.

The treatment must be governed by the intensity of the disease and the nature and extent of the trophic changes implicating the naso-pharynx. Careful examination of the ear and naso-pharyngeal cavity will guide the physician in the therapeutic and operative procedure applicable in these cases. Physicians should be familiar with the methods employed for the examination of the ear and naso-pharynx, and a careful and minute examination should precede the application of any form of treatment. In connection with local, active constitutional treatment is required to govern the bodily temperature, fever and pain likely to accompany the disease. The presence of glandular and mastoid complications should be treated according to the extent of the inflammatory and infiltrated condition of the parts involved. The importance of careful examination and accurate diagnosis in the management of acute inflammations of the middle ear must not be overlooked.

Dr. T. R. Pooley, of New York, remarked that there was but little to be said by way of criticism of Dr. Bendell's paper, he had so completely covered the ground in his comprehensive remarks on the subject. While agreeing with Dr. B. that the majority of cases of acute inflammation of the middle ear were due to the exanthemata, he recognized that a contingent of cases were caused by exposure to cold, and that the "earache" so common in infancy due to such causes was very amenable to treatment. Unlike Dr. B., he thought the better way, even in children, to effectually treat the throat and post-nares was by the use of the posterior nares syringe. In many cases a vigorous antiphlogistic plan of treatment would prevent the necessities for paracentesis of the drum-head, such as the application of leeches in front of the tragus or over the mastoid and the frequent instillations of hot water and medicated solutions, among which the best are *morphia* and *atropine.* *Cocaine* in such cases did not prove of much value; its antiseptic effects, which are most pronounced on mucous membranes, were here of too short duration. Moreover, it is an expensive article. Its greatest value was in operations on the eye and in acute iritis, when used in connection with atropine. Perforation of the drum-head should of course be made where it was evident that rupture would occur anyhow. Incision through the periosteum over the mastoid process and perforation of the bone should of course be made as soon as the indications presented.

In the treatment of the otorrhœa, the first reliance was, of course, to be placed on cleanliness, with the use of astringents, among which the use of *nitrate of silver*, *sulpho-carbolate of zinc*, and *alcohol*, either proof or diluted, were the best; the latter especially in cases where there were polypoid growths or granulations in the tympanic cavity which were too small or too numerous to be removed by the snare. In regard to the internal administration of the *sulphide of calcium*, Dr. P. thought that of late he had seen cases in which it seemed to be of benefit.

TREPHINING IN ESSENTIAL EPILEPSY.

Dr. J. C. Minor presented an extended paper on trephining for the cure of epilepsy. He described the characteristics of several cases in which the operation had been resorted to, on the assumption that epilepsy may result from compression of the brain. About fifty per cent. of the cases operated on were benefited or cured. The unfavorable cases afford no evidences showing that the operation had been of even temporary advantage. The number of cases in which trials have been thus far made are so few that it is inexpedient to attempt to formulate conclusions for or against the operation; it is certain, however, that the instances are not numerous in which epilepsy is occasioned by compression.

CROUPOUS PNEUMONIA.

Dr. J. W. Dowling occupied an hour during the morning session in a descriptive lecture on the pathology, physical signs and general conditions of croupous pneumonia. He pointed out in his usual lucid and characteristic manner the particular dangers and complications liable to arise in the course of this serious and often fatal disease.

The following brief summary feebly represents an occasion which afforded those who were fortunately present an opportunity rarely enjoyed at medical meetings for listening to an analytical dissertation on a subject of great interest to every practitioner:

The speaker stated that the advent of croupous pneumonia was accompanied by a single chill; never two or more as in pleurisy; and that there was, in nearly all favorable cases, a sudden fall of the temperature of the body, by crisis, on the seventh day.

Exposure to sudden cold is supposed to be one of the more frequent causes; he believes, however, that it has a germinal origin, and is produced by the presence of bacteria, or some other specific contagium, causing croupous pneumonia, and no other disease.

In seventy-five per cent. of cases the lower lobe of one lung is first affected, usually that of the right side; the whole lung may be involved, and in some cases both lower lobes. It is common to all ages, and occurs rather more frequently in males than in females. A large proportion of cases recover, provided the patient has been previously healthy.

The lecturer described the various conditions which involve a fatal termination. If the whole lung is affected; if there is a blood dycrasia; if the patient has become enfeebled by nervous exhaustion or too free use of alcoholic stimulants, the prognosis is unfavorable.

In his experience, which has been extensive and varied, he has found decided advantage from the continued use of *aconite*, *bryonia* and *phosphorus*, and, in addition to these remedies, hot flaxseed poultices, large enough to cover the whole lung, front and back, frequently renewed and applied hot, are of essential advantage.

VARICOSE ULCER.

Dr. C. W. **Stratton**, of Lee, presented a paper briefly describing the method of treating varicose ulcers on the leg, which he has found uniformly successful in his practice.

Treatment.—In the treatment of varicose ulcers, or any of the forms of ulcers usually found on the lower extremities, I first have the sore thoroughly cleansed by freely applying castile soapsuds. After drying the surface, I dust on dry *calomel*, and cover with sufficient absorbent cotton to rather more than fill the cavity of the ulcer above the level of the surrounding tissue. I then apply adhesive straps, allowing them to extend far enough on all sides to secure a firm attachment, and then fasten the ends so as to draw the edges of the ulcer together, and at the same time make pressure thereon. Then apply a roller bandage, beginning at the toes and covering the limb closely and smoothly to the knee.

If the bandage is properly applied, it will maintain its position three or four days, at the end of which time I renew the dressing in the same manner.

At this dressing and at subsequent ones, in case there are large and prominent granulations which bleed easily, I apply lightly and quickly the smooth surface of a stick of *cupric sulphate.* The copper sometimes produces at first very severe pain; after the second or third application, however, the pain occasions little inconvenience. In some cases a dose of *morphine* may be given to allay pain. This plan, if persisted in, will cure even the most obstinate cases.

The Application of Poultices not Desirable.—I deprecate the practice of applying poultices to varicose ulcers; in my experience they are of doubtful utility, and sometimes positively harmful. After the first dressing I allow no water to touch the sore. It is probable that the healthy pus, which is copiously secreted, is the most suitable covering, and ought not to be unnecessarily removed.

Treatment of Burns or Wounds.—After the first dressing I pursue essentially the same mode of treatment. If a large surface is denuded, the *calomel* may be more sparingly applied at first, lest by possible absorption into the system its toxic effects might be experienced.

Prejudice against Healing Chronic Ulcers.—A popular prejudice exists against the healing of chronic sores and ulcers; I have not, however, in an experience of many years, found any harm to result from the process of treatment herein described.

Dr. Pierce considered the method of treatment outlined by the author of the paper to be the best, safest and most likely to secure satisfactory results. He had followed essentially the same plan many years.

Dr. Paine approved the application of the *calomel*, the adhesive straps and the bandage. He had found, however, that much depends upon the kind of material of which the bandage is made. In his experience, a thick, all-wool flannel bandage is far superior to one made of any other material. Rubber bandages, while serviceable by means of their elasticity, are objectionable, in some cases, on account of their non-absorbing qualities. The thick flannel bandage, on the contrary, while sufficiently elastic to hold its place and maintain uniform pressure, freely absorbs and conveys away the perspiration, which sometimes is quite copious, and thereby constitutes the best kind of fabric for bandaging purposes that he had ever made trial of.

CASE OF PROLAPSUS UTERI.

Dr. D. E. Collins reported the history of a case of prolapsus uteri, in which the application of a suitable pessary afforded prompt and permanent relief from symptoms which had resisted all other plans of treatment previously tried, thereby saving the patient from a condition of great suffering and nervous prostration.

MENINGEAL ABSCESS—POST-MORTEM.

Dr. C. Spencer Kinney, of Middletown, assistant physician to the State Asylum for the Insane, furnished the following report of an obscure case of brain disease, the exact nature of which was revealed at the post-mortem. The condition found to exist may occur much more frequently than has been hitherto supposed, there being, in many instances, no opportunity afforded in private practice for verifying a diagnosis by a post-mortem examination.

History of the Case.—Mr. G. W. T., aged 48 years; married; three children; by occupation a laborer. There has been insanity in his family, on his father's side, but remotely; was admitted to the asylum October 21, 1882, suffering from what was supposed to be dementia paralytica.

His wife stated that three years previously he was at times irritable and violent without any apparent cause. His neighbors supposed that he was then drinking heavily, which was not the case. This condition of irritability increased. He was conscious that he was not well, and, without professional advice, vainly resorted to advertised popular remedies, with the effect of increasing the irritability to such an extent as to render moderate restraint necessary.

During this period he suffered from persistent insomnia; he became depressed in spirits, and twice made desperate attempts at suicide. He was prevented from doing himself serious injury by his attendants, yet in these scuffles his clothes were torn off and he was badly bruised. At these outbreaks he could not be controlled by appeals to reason; the paroxysms terminated only when his strength was entirely exhausted. These paroxysms were at first infrequent, and during the intervals between them he was able to pursue his customary employment, but toward the last his ability to work diminished, and for three months prior to admission he had not engaged in any remunerative labor whatever.

He not only desired to destroy himself, but also made several attempts to shoot his wife; and once, on awakening in the night, she found him standing over her with an uplifted club in hand, which he had previously secreted in their bed-room.

Before arrangements were completed for his removal to the asylum he was seized, at intervals of about one week, on two occasions, with what was supposed to be an apoplectiform paroxysm.

Symptoms.—An examination at the asylum showed the following symptoms: He was aphasic to such an extent as to be unable to give any intelligible account of himself; he was weak physically and mentally; the expression of his face indicated apprehension of evil; the pupils were dilated; the facial muscles and tongue were tremulous; his sleep was dirturbed; his appetite was good and the action of the bowels regular; he weighed one hundred and thirty-seven pounds; he gave no evidence of bodily suffering.

This condition remained essentially unchanged many months. He was permitted for more than a year to walk about the hall in company with other patients; he was then removed to the hospital, mainly because he did not appear as strong as formerly. He was then kept in a recumbent position. His appetite remained unimpaired, but he slept only from two to five hours at night.

He could not give expression to his wishes in coherent or intelligible words. He occasionally had hallucinations of sight by which he seemed greatly terrified, during which he could with difficulty be restrained in bed. The whole surface of the body became abnormally sensitive to the touch. He would, with an impatient gesture, endeavor to prevent any one from feeling his pulse. He would frequently raise his left hand as if to brush something from his left temple. This was the only evidence of pain or discomfort in his head. The only symptoms were objective, and these were few in number.

Aside from slight increase of sleep and steady loss in weight, his condition remained almost unchanged until the spring of 1884. On the afternoon of April 27, the attendant noticed that for about one minute the patient's breathing was hurried and blowing. When it ceased he fell into a quiet sleep. Two hours later he became semi-conscious; face flushed; eyes bright; pupils dilated; skin hot; pulse 132; temperature 104°.

On the 28th he slept five hours; appeared to be conscious; lips and tongue dry; ate a usual amount of nourishment; pulse 108; temperature 102°.

April 30. All the functions of his body acted normally, eating and sleeping as in health; temperature 101°.

May 1. Patient slept five hours during the night; temperature 99°; during the day he had several paroxysms, in which the left side of his body trembled for a few minutes at a time. These paroxysms continued at short intervals, none being violent and all being transient, for one week. He began to fail rapidly on the morning of May 8, and died, with scarcely a struggle, soon after eight o'clock in the evening.

Post-Mortem.—Held May 9. Rigor mortis well marked; body greatly emaciated; length of body, five feet and four inches; the skull was found to be one-quarter of an inch in thickness; there were no adhesions; the dura mater was thickened, opaque and injected, covering all that portion of the brain under the right parietal eminence and extending forward under the frontal bone as far as the longitudinal fissure, and to the right as far as the temporal bone. On cutting through the dura mater, about four ounces of brown, watery pus escaped, a product of an enormous meningeal abscess, contained in a sac at least one and a half inches in depth and four inches in width.

The brain underneath was firm and smooth. A thin, pyogenic membrane had formed, but there was no evidence of rupture of the sac. The brain weighed forty-four and a quarter ounces.

The heart weighed nine ounces; its walls were softened; the mitral valves were thickened and presented a scalloped appearance. The right lung was adherent to the walls of the chest superiorly; its tissue appeared normal; weight, sixteen and a half ounces. The spleen was normal; weight, two and a half ounces. The left kidney contained traces of fat in the upper portion of the pelvis; weight, four and a half ounces. The right kidney contained fat in the upper portion of the pelvis; weight, three and a half ounces.

FRAGMENT OF STEEL EXTRACTED FROM THE VITREOUS HUMOR WITH THE ELECTRO-MAGNET.

Dr. T. R. Pooley, of New York, related the following case: February 4, 1885, A. K., aged 36, of New York, was planing steel, when a splinter flew off and struck his left eye. Little pain followed, but the sight was lost. The day following he came to my service in the New York Ophthalmic and Aural Institute. Examination of the injured eye showed moderate circumcorneal injection, small pupil, synechiæ; a wound in inner part of cornea and iris; lens opaque; vision, perception of light; field complete; some tenderness on pressure over ciliary region. At 4 P. M., same day, eye cocaineized. A linear incision was then made with a Beers knife between the internal and external recti muscles and an electro-magnet used as a probe introduced into the vitreous chamber. On the third introduction of the instrument the foreign body was brought into the wound, where it was seized by a pair of forceps and extracted with some difficulty. It measured 4.5 millimeters, and was cresentic in shape. The wound was closed by a conjunctival suture. February 6, had no pain during the night; no discharge; slight swelling in the region of the wound; suture has given away. February 8, pupil dilated; adhesion only at point of entrance of foreign body; V. = 200. The recovery was comparatively slow, pupil contracted, and there was pain every night for a week; then the iritis subsided, the eye became white and free from pain; the cataract progressed, yet on the date of his discharge from the hospital, eleven days after the operation, he could count figures at one foot. I learn that he was seen last July 10th at the dispensary, and that the operated eye had normal size, aspect and tension, and was free from irritation. Under these circumstances we may confidently predict that by an operation for the removal of the cataract good vision may be restored.

STATE BOARDS OF MEDICAL EXAMINERS.

Dr. H. M. Paine called attention to the desirableness of putting forth effort with a view of elevating the standard of medical requirements. He read extracts from a paper by Dr. William H. Watson, an honorary member of the society, entitled "A Higher Standard of Medical Education and Medical Licensure Demanded," which paper was read by Dr. Watson before the recent University Convocation held at Albany. The principles which should lead to governmental control of medical education and practice are clearly and forcibly enunciated in this paper. [See Albany Medical Annals, August, 1885, p. 233 *et seq.*]

TESTIMONIAL OF RESPECT TO THE LATE DR. J. S. DELAVAN.

Dr. H. M. Paine stated that a prominent member of the society, Dr. J. S. Delavan, had been suddenly removed by death. The deceased was a man in middle life, and was engaged in a large and successful practice. He had been acquainted with Dr. Delavan more than twenty-four years, and desired to express admiration of his many noble qualities. He was conscientious in the discharge of his duties as a citizen and physician; he was affable and sympathetic in manner and earnest in promoting all measures having for their object the alleviation of human suffering.

Dr. J. W. Dowling spoke of the deceased as an able and skillful physician, genial and courteous in manner. He recognized, on reviewing the characteristics of Dr. Delavan, many of those noble qualities which combined to constitute the highest type of a medical practitioner. He was greatly shocked on hearing of his death, and expressed condolence and sympathy for the bereaved family.

The following resolutions of respect, presented by Dr. R. Slocum, were unanimously adopted :

Resolved, That the members of the the Medical Society of Northern New York have learned with deep sorrow of the death of an honored associate, Dr. J. S. Delavan.

Resolved, That in this afflictive dispensation the medical profession has lost one of its brightest and most accomplished representatives, and the public a sagacious counsellor and a prudent and eminently successful physician.

Resolved, That by his genial and courteous manners, his noble qualities of heart and mind, his desire to promote every effort which had for its object the alleviation of human suffering, his whole-souled devotion to the interests of medical and sanitary science, his name has been placed high on the roll of the best representatives of the medical profession.

MISCELLANEOUS.

Dr. PIERCE offered the following, which was unanimously adopted:

Resolved, That we hereby express our hearty appreciation of the generous hospitalities provided by Dr. J. C. Minor, at the summer meeting of the society, held at the Grand Union Hotel, Saratoga, August 12.

The following physicians were elected to active membership: Dr. Herman Bendell, of Albany; Dr. R. B. Sullivan, of Albany; Dr. D. T. Pierce, of Argyle, Washington county; Dr. J. A. Rich, of Pittstown, Rensselaer county.

Letters from Drs. Vincent, of Troy; J. C. Otis and W. H. Gridley, of Poughkeepsie; C. A. Gale, of Rutland, and others, were read, expressing regret on account of inability to attend the meeting.

There were present at the meeting physicians representing the counties of Albany, Rensselaer, Saratoga, Washington, Warren, Greene, and the city of New York.

The thirty-fourth annual meeting of the society will be held at Troy or Albany, at the discretion of the Secretary, on Wednesday, October 7, 1885.

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ANNUAL INTRODUCTORY ADDRESS BEFORE THE ALBANY MEDICAL COLLEGE.*

BY FRANKLIN TOWNSEND, JR., M.D., ALBANY,
Professor of Physiology, Albany Medical College.

Gentlemen—Convinced of the truth of the proposition that "Belief in the efficacy of preaching is the bane of educational systems," as, indeed, it is the bane of criticism, art, religious instruction, and so many other of the forms in which we seek to influence one another, and acting upon the hint therein contained, I shall spare the medical novice a homily on the blessedness of industry, practice, sagacity and virtue, but will assume that with all this he is more or less familiar. Instead, I prefer to take him into my confidence, asking him to join me in considering some circumstances which are likely to affect the nature and method of his future studies, and which may influence for good or evil his ultimate career through life. In doing this, it is taken for granted that he has already deliberately made his choice of our profession, and is prepared to accept the medical status as by authority, law and established custom. As a beginning, then, in this discourse, I will ask your attention to a subject which has occupied my mind for a long time, and one which seems to me to be of no little interest and importance to every medical gentleman. I refer to

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*Delivered Tuesday, September 8, 1885.

THE PRACTICE OF MEDICINE AS AN ART.

As medicine has for its object the preservation and restoration of health, it comes under the definition of an art; a term, the import of which consists in the adaptation of means to ends. The means must be derived from the previous knowledge of the changes producible by them, whether as corporeal agents constituting physical causes, or as affections of the mind constituting moral causes. A most precise criterion for distinguishing rational beings from the brute creation is the faculty of adapting means to ends; and there is perhaps no attribute purely intellectual to which the term *reason* is so applicable. It marks the first line of distinction between man and the lower animals; it is this which characterizes his intellectual nature, as that moral agency which renders him an accountable being characterizes his moral nature; both, when taken together, forming that insuperable dividing line which separates him from all brute creation. To contemplate an end, and to devise a means by or through which that end may be obtained—in other words, art and design—implies a faculty unknown to mere animals, but to a more preëminent being, *sanctius his animal et mentis capacius altæ.*

From this it must follow that, as it is physical influence with which we, as followers of the medical profession, have chiefly to do, the main and ultimate object in cultivating this art must consist in ascertaining this agency of external objects, whether salutary or noxious on the living body, and in applying or avoiding them so as to obtain the desired end, either to prevent the occurrence of disease or in converting morbid conditions into those of health; and it is in the extent and correctness of our knowledge of these agents that the perfection of our art must consist. This knowledge to sceptical minds has appeared so unattainable as not to be worth prosecuting, inasmuch that they have raised the serious question, *An datur ars medicinæ?*

It is alleged by such thinkers that the powers and resources of nature, in the human as in the brute creation, are all sufficient; that we do not possess such power over the agencies of nature nor such knowledge of their application as to constitute an art; that the history of this pretended art in all ages so teems with the fanciful influences of superstitious observances, the imaginary virtues of medicine, with nugatory, delusive, inefficient, and capricious practices, fallacious and sophistical reasonings, as to render it little more than a chaos of error, a tissue of deceit unworthy of admission among the useful arts and liberal pursuits of man. There is a certain class of the more enlightened type in the social scale who consider the belief in the power of medicine as little better than a vulgar error, and one, indeed, to be discarded from the liberal mind almost as much as the delusions of superstition. But may it not be said of medicine, as Lord Bacon says of religion, that "the plain and the profound meet," and that the superficially learned are the most unbelieving and sceptical? A cursory knowledge begets doubt, one, though, which is thorough, brings back to belief.

Such allegations as have been cited strike not only at the dignity and importance, but at the very *existence*, of the art of medicine. To be sure, the argument from the brute creation seems plausible possibly, and it might have been added that whole tribes of the human race pass through life without the benefit of any regular art of physic. But, though animals are little subject to disease compared with man, it is not strictly true that they use none, for their instinct teaches them much. Neither are the untutored tribes of mankind without their valuable remedies, discovered by natural sagacity; but it is an unquestionable and remarkable fact that savages seldom attain to old age, though their maladies are much fewer, and the mechanical injuries to which they are liable are much less frequent than among nations cultivating the arts and sciences. And it is incontrovertible that if the powers of unassisted nature were all sufficient, whether in rude or civilized society, all mankind, or, at all events, a large majority, would die of old age, which is far from being the matter of fact at the present time.

The maladies and casualties incident to the human kind are more numerous and complicated than those of the lower animals in consequence of the artificial habits and practices peculiar to rational beings, and they are still multiplied by that superior cultivation of reason which distinguishes civilized from savage life. The exercise of reason has also a tendency to obliterate, or at least to weaken, such suggestions of instinct as animals possess, and those dictates of natural sagacity which are found among barbarous tribes, and which nature has implanted for the protection of both; but even in the rudest social state much is left to reason, as is to be observed in the helpless condition of the infant in all situations of human life. From considerations like these, then, it seems obvious, in accordance with the wise and beneficent arrangements of Providence in other branches of creation, that compensation should be made by reason's proving a corrector of evils which reason had induced, so that artificial ills should be counteracted by artificial remedies. This is presumable *a priori* from the analogy of nature; but not only is it presumable, but incontestably true, in fact, that most diseases are more or less under the control of art, and one could be mentioned of such potent malignity that it would have gone far toward the extinction of the human race, had the power of medical art not interfered and advantageously resisted its awful ravages. This is simply an example drawn from curative medicine, but instances equally important and convincing might be quoted from the history of preventive medicine, in the various means which have been devised and practiced for obviating and extinguishing infections and contagions, engendered by the more or less artificial habits of human life, in the various stages of civilized society. Again, the unbounded number and variety of powerful and effective agents which medical art has utilized, and by which the living human frame can be acted upon afford further ground for admitting that medicine is a real and mighty art. These consist not alone in the scientific regulation of the diet, with the addition of strict sanitary precautions, including the attractive study of hygiene, but there is also such an ample and beneficent provision made by nature in the production of the vegetable, animal and mineral kingdoms, so diversified in their peculiar and respective virtues as to be coördinate with a parallel diversity of human suffering, and such as to leave no hesitation in interpreting their meaning as a portion of that system of final causes so magnificently and expressly displayed in the whole work of creation. Would it not also be an anomaly, as well as blot, in the beneficent adjustments of this same creation, that human-kind, under the extremity of suffering, should, by the impulse of nature, call aloud for relief, without any means being afforded for furnishing it? Their cries are, indeed, so imperious that even inefficient, and, I may say, pernicious measures will be caught at, if those of salutary and efficient nature cannot be procured, so that the dearest and tenderest interest of mankind would be left at the mercy of ignorance, selfishness and fraud, unless society were protected by the guiding light of experience and knowledge.

It is too true that the practice of medicine has been prevented by fallacious reasoning, and by the misapplication of the powerful resources discovered by superior intelligence; and it has been sarcastically said, "Though there is a wide difference between a good physician and a bad one, there is but a small difference between a good physician and no physician at all;" by which is meant to insinuate that the mischievous officiousness of art does commonly more than counterbalance any benefit derivable from it. Looking at the subject from this standpoint, it must be taken for granted that there is a greater risk of nature being thwarted by professional interference, than by the sick being left in the hands of the uninstructed. But is he who is uninstructed more likely to imitate human nature than one skilled and educated; and at times is not the kitchen as fertile in noxious articles as the apothecary's shop? Indeed, the ignorant are more apt to counteract nature by pernicious interference with her than the wildest professional theorist; nay, ten to one, he is the greatest theorist of the two, for every old woman has her theory generally drawn from the humoral pathology. The faculty of clearly comprehending and fairly interpreting the ways and aims of nature is one of reason's highest efforts, and is attainable only by attentive study combined with a happy turn for observation.

In conclusion, then, it is the really enlightened physician, alone, who can discern, in each particular case, to what extent art is availing. But at all events he is bound not to desert his patient, and while he himself forbears from doing harm by untimely interference, it is his duty to protect those who are so eminently exposed to the over-active officiousness of others. He will likewise, if I mistake not, feel it incumbent on him to administer the moral remedies of consolation and sympathy, and to assuage the anguish of despair. Those who conceive the whole art of medicine to simply consist in wielding the magic powers of the *materia medica* entertain a narrow and unworthy conception of their own duty, and of the value and dignity of their profession.

The scepticism which I have been combatting is a disease of the mind, which, like some of those of the body, is the offspring of over-refinement. But the great mass of error with which medicine has been encumbered has been engendered by an opposite mental malady, *credulity*. Usually this has been regarded as the peculiar reproach of the rude age, and of the vulgar and illiterate in more refined communities; but if we are to include under it the hasty adoption of crude and fallacious theories derived from real or pretended principles of science, it will be found that in the history of medicine there is equal room for the imputation of credulity in the learned and cultivated ages as in the rude and illiterate.

It seems evident, then, from all that has been said, that medicine being an art beset with all species of fallacy, it is of the utmost importance that those who engage in its study should be fully aware of this fact, and that they should so discipline their minds by a knowledge of the laws of evidence and the rules of investigation as not to fall into either of the extremes of credulity or scepticism. As we are to be guided more by experience than by hypothesis, it is further evident that the rules for ascertaining and appreciating facts, and the study of the laws of evidence, ought to form an indispensable part of medical education. Nor let any of us think this a matter of easy attainment, for Bacon himself, the great inductive reasoner, was so far infected by the prejudices and errors of his predecessors and contemporaries as in various parts of his works to give humiliating proofs of childish credulity in regard to certain superstitions and frivolous practices which then prevailed.

In brief, then, gentlemen, to summarize: The sound state of the mind in the exercise of the medical art, as in all other practical pursuits of life, must consist in conceiving clearly and correctly the reciprocal relations of cause and effect, for as it is upon such knowledge alone that the adaptation of means to ends, in which we have defined *art* to consist, can be founded, it is by the ascertained agencies of nature, and the just application of such as we can command, constituting skill and judgment, that the cure and relief of disease is brought about.

When we revert to the state of medical knowledge not more than perhaps two hundred years ago, and mark the advances that have steadily taken place, we cannot fail to be impressed with the difference, and can easily account for the numerous disquisitions that have appeared on the uncertainty of the science, and for the ridicule cast upon its professors by the various satirists. Medical science has always kept pace with the progress of the physical and moral sciences, and where these have been defective, or marked by folly and credulity, it has exhibited similar failings.

In the time of D'Alembert and Rousseau there was ample ground for the ridicule so frequently indulged in by those and other distinguished writers. "The following apologue," says D'Alembert, "made by a physician, a man of wit and philosophy, represents very well the state of that science: 'Nature is fighting with disease; a blind man, armed with a club—that is, the physician—comes to settle the difference. He first tries to make peace; when he cannot accomplish this, he lifts his club and strikes at random; if he strikes Nature, he kills Nature.'"

At the time, however, when D'Alembert wrote, the art of medicine was enveloped in mystery and empiricism, beside fraud and imposture. "Until a comparatively recent period the doctrines and precepts of Hippocrates were followed reverentially, and the most degraded attention was paid to authority and established routine."

This folly has been properly castigated by Moliére, in his "L'Amour Médecine," in the dialogue maintained between the physician Tomès and the maid Lisette:

"*M. Tomès*—'How is the coachman?'

"*Lisette*—'Very well; he is dead.'

"*Tomès*—'Dead?'

"*Lisette*—'Yes.'

"*M. Tomès*—'That is impossible.'

"*Lisette*—'It may be impossible, but it is so.'

"*M. Tomès*—'He cannot be dead, I say.'

"*Lisette*—'I tell you he is dead and buried.'

"*M. Tomès*—'You are mistaken.'

"*Lisette*—'I saw it.'

"*M. Tomès*—'It is impossible. Hippocrates says that such diseases do not terminate till the fourteenth or twenty-first day and it is only six days since he was taken sick.'

"*Lisette*—'Hippocrates may say what he pleases, but the coachman is dead.'"

Molière died about the commencement of the last century, and although his art had, doubtless, some effect in rectifying that which should have yielded to sober reflection, his censures were well merited years after they were written, and, I might add, are by no means devoid of application at the present day.

And now, gentlemen, before ending, let me say a few words, especially to those of you who are at the threshold of your attendance upon medical lectures. You will find, or else be liable to conceive, that in the multiplicity of subjects to which attention is necessarily directed through the day, it is impossible for you at first to succeed, and you may be disposed to relinquish the study in despair. Fortunately, however, it rarely happens that this disposition is carried into effect before you find that your minds are every day expanding, that the scientific truths expounded by your professors and as given in your text-books become more and more intelligible, the memory more retentive, and the labor, therefore, largely diminished. Despair now vanishes, and hope, "the glad ray, glanced from eternal good," cheers you on your course, until all obstacles are vanquished, and you obtain that goal which has been the source of your loftiest aspirations.

Requisites, then, to success must be zeal and enthusiasm in the pursuit of knowledge. Yet, to obtain a high and well-merited degree of eminence as medical students, it is essential that your time passed in reflection should be *well spent.* The excuse of "want of time" is rarely valid, and he who avails himself of it, if he examines his conduct, will discover, I think, that it is not the *want* of time, but time *misspent*, which he is wont to deplore.

He may be occupied from "early morn till dewy eve;" but like as solitude, a "populous solitude," may exist in cities, "midst the crowd, the hum, the shock of men," so may idleness be conspicuous in the midst of apparent occupation.

In the way to study, as in the way to wealth, fractions must not be disregarded. It is a trite but wise maxim, that if we take care of the pence, the pounds will take care of themselves; and the parody is no less just, that if we take care of the minutes, the hours will look out for themselves also. It is astonishing what may be accomplished by seizing upon every interval for study, and by disciplining the mind to the effective exercise of its powers. If you only can succeed in this, but little nocturnal application will be necessary to treasure up the materials of science; while, if you commence with attempting *too much*, like the improvident racer who puts forth his whole strength at the onset, you may find yourself distanced by competitors who have been more prudent of their forces, and yet who may not excel you in abilities. In the one case, too, you incur the risk of injuring your health by collateral irregularities, while in the other, study becomes not a toil, but a fascinating pleasure. You have "a time for all things," and if a portion of it be employed in recalling and investigating the knowledge daily derived from your instructors and books, and deducing the lessons of wisdom from such knowledge, it will be well spent.

Indeed, a distinction must be made between knowledge and wisdom, although it must be confessed that a portion of the former may be essential to the latter—a distinction well pointed out by the great moral poet Cowper, and which might be kept with propriety in the minds of all students.

Thus speaks the poet:

> "Knowledge and wisdom, far from being one,
> Have ofttimes no connection. Knowledge dwells
> In heads replete with thoughts of other men;
> Wisdom in minds attentive to their own.
> Knowledge—a rude unprofitable mass,
> The mere materials with which wisdom builds,
> Till smooth'd and squar'd and fitted in its place,
> Does but encumber whom it seems to enrich.
> Knowledge is proud, that he has learnt so much;
> Wisdom is humble, that he knows no more."

In striving to reach the temple of science, situated as it would seem at a giddy elevation, you that are young and aspiring will find the path often skirted with the fairest flowers, but occasionally sterility and cheerlessnes mark the way through its various zones of vegetation, yet, by judicious perseverance, you will be able to surmount in succession the "hills on hills, Alps on Alps," until you ultimately attain the summit of your ambitious desires, and from the magnificent portals of the temple will be enabled to dispense health and consolation to the afflicted, and to look back with pride and satisfaction on the steadiness of purpose which has enabled you to overcome the toils and difficulties of the ascent.

Pelvic Anodynes.—Dr. Alfred Meadows (*British Medical Journal*): 1. A vaginal pessary of conia for ovarian pain, neuralgic or inflammatory. 2. Bromide of potassium, in ovarian mucorrhagia, limits the flow, and increases the length of the menstrual interval.

Nurses' Sore Mouth.—(*Am. Med. Jour.*) ℞. Mother tinct. eupatorium aromat., ʒ ij; Fl. ext. hydrast., ʒ ij; Water, ℥ iijss. M. S. One teaspoonful each hour. The mouth is cooled, the leucorrhœa lessened, headache and nervousness controlled.

DOUBLE OVARIOTOMY.*

BY FRANKLIN TOWNSEND, JR., M.D., ALBANY.

Mrs. K. D., of Columbia county, N. Y.; age 31 years; American by birth; married eight years, during which time she has had four living children and one abortion at the third month. Menstruation had always been regular, ceasing only during her pregnancies and periods of lactation. Has never suffered from dysmenorrhœal symptoms, and at no time have her labors been complicated or hazardous. Her family history is good. Patient consulted me at my office, accompanied by her family physician, Dr. P. V. S. Pruyn, of Kinderhook, on May 29, 1884. A thorough examination was then made, and Dr. Pruyn's diagnosis of tumor of the ovary confirmed. Indeed, it was found that *both* ovaries were involved in morbid processes, the left having degenerated into large multiple cysts, while the right was just beginning cystic transformation. In that the patient was in no way suffering from the growth at this time, and apparently being otherwise in perfect condition of health, and in consideration of the fact that she was then nursing her six months' old infant, it was advised that she await further developments and to continue nursing her baby, which was not then in robust health.

The abdominal distension in Mrs. D.'s case was by no means excessive, and, by the aid of a perfectly fitting external supporter, she was made to feel very comfortable. Early in October, 1884, she for the first time intimated that she felt pain in the right inguinal region, extending well up into the right hypochondriac. Her physician called my attention to this fact, and about the 10th of October I again saw her, when, after a careful examination, I became convinced that there must be adhesions forming between the sac and surrounding structures in or about the regions mentioned. I therefore advised the propriety of weaning her infant. On October 16, Dr. Albert Van der Veer and I saw the patient. She had not, as advised, stopped nursing. After a thorough examination had been made by us both it was deemed expedient for her to return to her home, to immediately and completely wean her child, and, after which, to present herself for operation in a private room engaged for her at the Albany Hospital.

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* Read before the Medical Society of the County of Albany, Wednesday evening, January 28, 1885.

Operation—Double Ovariotomy.—On October 23, at 10:15 A. M., assisted by Drs. Van der Veer, Ward, Boyd and Snow, beside the resident house surgeons, Drs. Bradbury and Babcock, an operation, *a la* Tait, was performed by me, both ovaries and part of the Fallopian tubes being removed.

Some difficulty and delay was experienced in removing the large cystic growth involving the left ovary, because of its adhesions on the right side, in the right inguinal region, to the pelvic fascia and loops of intestines. The right ovary came away easily enough, and was about three to four times its normal size, beside being cystically degenerated.

The operation consumed just one hour's time. No vomiting nor great amount of shock. Pulse 100; temperature 99°. Bowels had been thoroughly emptied prior to the operation, as also was the bladder. The temperature was afterwards taken regularly every fourth hour by Dr. Babcock. On the evening after the operation both pulse and temperature rose quite considerably. Pulse 120; temperature 103.5°, due no doubt to the reaction following this rise of temperature came a fall on the succeeding morning to 100 3-5°, remaining thus until the fourth day, when there was a sudden rise to 102.5°, due possibly to accidental metrostaxis or to great accumulation of intestinal gas, with abdominal distention and distress, accompanied by nausea and vomiting of an acid biliary secretion. The bowels had not moved up to this time, though the patient had taken six successive drachm doses of magnesia sulphate in hot water every third hour, beside four enemata of sweet oil and turpentine in warm water. She became restless and irritable, and complained not inconsiderably of pain over her whole abdomen. Her expression was exceedingly anxious, and her tongue brown and dry. Morphine had been used twice daily since operation, one-quarter grain at a time, hypodermically administered. I then used the rectal tube, which allowed the escape of large quantities of flatus, with marked relief to patient. On the following day another introduction of the rectal tube was made, beside an enema of oil and turpentine. On the sixth day after operation patient's bowels moved freely — three passages, fluid in consistence — when all disagreeable symptoms vanished.

Abdominal stitches partly removed on the eighth day after operation, and on the ninth the remainder. Abdominal wound united by first intention throughout its whole length, with the exception of a quarter of an inch, perhaps, at the superior angle. Iodoform, in powder, was here applied.

From this time patient improved nicely and rapidly, and on November 15 she was discharged *perfectly* well. On this day she drove with her husband in his buggy from Albany to her home, a distance of about eighteen miles. About two weeks later a stitch-hole abscess made its appearance near the superior angle of wound, which was carefully attended to by her physician, Dr. Pruyn, and which became perfectly well in a short time. Since then patient has enjoyed good health, being able to attend to her various household duties. She is wearing an abdominal support in the form of a broad flannel roller, and at the present time (January 28, 1885) she may be looked upon as a permanently cured and well woman.

Specimen is to be found in the Albany Medical College museum. Weight of cystic material with part of Fallopian tube: Left side, 2 pounds; contained fluid (eight quarts), 18 pounds; right ovary, with part of tube, 4½ ounces.

PRESIDENT'S ADDRESS BEFORE THE MEDICAL SOCIETY OF THE COUNTY OF ALBANY.*

BY J. D. FEATHERSTONHAUGH, M.D., COHOES, N. Y.
Albany Medical College, 1874.

Mr. Vice-President and Gentlemen of the Society:

It is with mingled feelings of regret and satisfaction that I occupy your attention for the last time in my official capacity—regret that these relations, so pleasant to me, are to be broken; satisfaction that the responsibilities of the office are to be transferred to other hands.

The year has not been an eventful one to us. No burning questions, ethical or otherwise, have pressed on us for solution. No startling events have troubled our confabulations. Even the perennial pessary man has been lulled into gynecological slumber, and the fruits of his invention sleep unprofitably in the matrix of time. Tired of a superfluity of wisdom, the society about this time last year tried the old advice, *Misce brevem stultitiam cum consiliis.* The little relaxation indulged in was relished by the best of men (the Albany men, of course), and if folly presided over the banquets, she bore the cheerful aspect of two of our respected ex-presidents. Since that time the usual meetings have been held. They have been moderately well attended. Some most excellent papers have been read, and the society has increased and flourished. The society is to be congratulated that, having this year reached the venerable term of four-score years, its annual increase still goes on.

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* Delivered at the Annual Meeting, Tuesday, October, 13, 1885.

Could I point to only the sunny hours of our common life, I would leave, like the dial, the time of gloom unrecorded; but Death with his finger has marked one hour as his own. To the beautiful and affectionate tribute that our vice-president has already paid to the memory of our departed friend, Dr. William N. Hays, I can add nothing save my sincere assent.

It has been the custom here for the retiring executive to devote some portion of his address to a scientific, or at least to a professional, subject. I have, therefore, chosen a subject which, although taken from the field of minor surgery, is of interest to me, and, I trust, not distasteful to you.

SURGERY OF THE HAND.

The hand is, within itself, an instrument and even complement of the mind, and as such, is specially obnoxious to injuries. These injuries result in loss of part, or parts, of its integrity, with disfigurement, or impairment of usefulness. Both of these results must be borne in mind, and the sacrifice of one to the other must be determined by the special requirements of the case.

The cases presented in this paper have generally been those of mill operatives, to whom a useful hand has superior advantages over any æsthetic considerations.

The average age of patients has been fourteen years, so that it falls within that period, viz., from ten to fifteen, at which the general mortality is least, and, if the corollary be correct, at which resistency to disease and accident is greatest. It is in this class that conservative surgery has its greatest success. Evolutionary processes have weeded out the unfit, and the injurious habits and vices of a later age have not yet been acquired. Hence *operations* are *well borne*, and injuries quickly and safely recovered from.

In injury of the hand, owing to large vascular supply, repair is rapid, and the difference between the regenerative process there and the inferior extremities is easily seen, so that preservation of nearly oblated parts may be often obtained. Thus, given a case of transverse section of the finger, if one-third of circumference of skin bridges the separation, their union, if uncomplicated, is not unlikely. That this, and similar results, may not be obtained by very great varieties of treatment I will not gainsay. Even the sturdiest supporter of Lister must pause at the splendid list of one-hundred and twelve consecutive and complete ovariotomies, without a fatality, by the eminent physician lately visiting us.

Notwithstanding, if we do not give entire assent to the methods, the general principles which underlie Listerism are based upon widely-received facts, and constitute the groundwork of modern surgery. It is, therefore, with this idea that I have ventured to bring before you the results of different treatments carried out for a number of years. It is a record of ten years, carefully kept, of injuries of the hand. They have been classified as nearly as possible, and lest I illustrate unconsciously a quotation from a late chirurgical and autobiographical work, "Doctors amputate too often," I hasten to save the moral, and myself, by adding that many cases classified as amputations were accidents, in which the flaps were merely trimmed and bone divided higher up.

The first series of cases is included in the period of seven years from 1875 to 1882. The second series, a period of three years, from 1882 to 1885.

The same general methods of operation have been performed throughout both series, with the exception that the circular method of amputation has been performed more frequently of late in the second series, in the belief that there is less comparative damage to integument than in flap methods. Amputations of phalanges, when injury has been below middle phalanx, have been done in continuity of metacarpus by oval method, with one or two exceptions, when a modified dorsal flap operation has been performed over metacarpal phalangeal joint.

The general exception to this rule has been the index finger, which has always been respected and its proximal phalanx preserved.

Amputation at the joint has been preferred to amputation in continuity, in the belief that repair is quicker and immediate union more likely to take place at that part. The stump, although not so seemly, is more endurant of work and less likely to be followed by consecutive accidents. No ligatures have been used, and sutures have been of silk in first series; metallic ones and silk rendered antiseptic have been used in the second.

The after-treatment of these cases has, of course, been somewhat varied, according to their requirements. The general plan followed in the first series has been a washing of the wound with carbolized water, an attempt, before closing the wound, to dry it of any blood or serum (of which the last is always profusely poured out under carbolic douche), silk sutures, adhesive plaster dressings and muslin bandage. These, with frequent washings and change of dressing, have been the means relied on for amputations.

Resection at joints, compound fractures and lacerations, have been treated upon a partly open method, with frequent irrigations of carbolized water and changes of lint dressing.

This was my general plan for seven years. Whether the results were good or not I have no means of knowing, having no statistics of similar classes of injuries except this later series of my own to compare these with.

Finding, however, many of my primary amputations fail in immediate union, and often after it had been established having the mortification of seeing it destroyed by a suppuration within the wound: having observed that if a series of injuries were dressed consecutively that one badly suppurating wound would often light up inflammatory attacks in other nicely healing stumps, probably through the media of sponges; having a few cases of erysipelas occur from operations, which, although not of much injury to the case in question, were, I believe, infective as to more serious operations; I became a convert of the modern gospel.

The methods employed in the second series were entirely different, and are here recounted. All instruments are placed, previous to, operation in a solution of carbolized water, about one to thirty. The parts to be operated upon are washed in a solution of mercuric chloride, one to one thousand. After completion of operation the washing is repeated. The parts are then wrapped in fine oil silk previously wet with mercuric solution, and surrounded finally with patent lint wrung out of same solution. Immobility of parts is secured by guttered tin splints. Dressings are infrequent. Thorough drainage has always been secured where it seemed needed.

You will not, gentlemen, find any originality in these methods. They have been told at many times and in many places, and are here recounted simply in connection with results obtained.

Let me state here that the use of the very handy and abominable instrument, the bone forceps, as applied to the division of bone in amputation of extremities, has been entirely replaced by the saw. I have used lately a circular saw of about three-fourths of an inch diameter, which, revolving at a high rate of speed, divides small bone structures with a certainty, celerity and cleanliness that I have not attained with any other instrument. The saw can be actuated by any motive power, but as these operations have almost uniformly been performed at my office, I have driven it with a few bichromate cells, through the medium of a small electric motor. The motor I have found best suited for this service is one known as the Diehl motor, in which the speed can be perfectly regulated by an ingenious arrangement by which the pole pieces may be adjusted proximately or remotely to the armature.

The cases are here tabulated:

FIRST SERIES.

	Whole No.		Number.	No. of Days.	Erysipelas.	Secondary Hemorrhage.	Thecal Abscess.	Osteo Myelitis.
Primary amputations in phalanges.......	101	By immediate union	70	15	..	..	1	....
		By granulation.....	31	33	2	1	3	1
Secondary amputations..............	25	By immediate union	5	18	..	....	....	....
		By granulation...	20	42	1	....	1	...
Resection at joints.....	8	By immediate union	1	12	..	....	....	...
		By granulation.....	7	38	..		....	....
Compound fractures and lacerations....	61	....	61	40	2	2	2	...

SECOND SERIES.

	Whole No. of Cases.		No. of Cases.	No. of Days.	Palmar Abscess.	Secondary Hemorrhage.
Primary amputations.....	52	By immediate union	45	14	...	....
		By granulation.....	7	30	1	...
Secondary amputations....	3	By immediate union	3	17	...	....
		By granulation.....	....	....	....	....
Compound fractures and lacerations	40	....	36	....	....	1

I will not attempt to analyze the results in these two series, but leave them to your own comparison.

And now, gentlemen, as I draw to the close of my official connection with the society, let me thank you for your constant kindness and support. The recollection of it will last long after the office itself shall have been forgotten by me.

Men come and men go, but the society still lives, and will live. One by one the elders have departed, until scarce one "good grey head" remains. They have had their apotheosis; but we live in the present. For us the future holds all things in its hand.

Unanimity of purpose and a devotion to purely scientific ends have brought peace within our borders. The contentions of our classical era are unknown. *Nec verba minacia fixo aere leguntur.* The broad, liberal hand of our day has removed the threatening legend, which humanity and enlightened policy demanded. If we turn for a moment to the physical sciences, the progress for the last ten years has been very great. Not only in special directions has it lent its aid to us, but the benefit that we have derived at large from precise and scientific methods of thought, from employment of accurate aids to diagnosis, and the discarding of windy theorizations, has been enormous.

With these encouragements, let us labor heartily in our profession, remembering that though we labor in a field that the light of research constantly widens, we labor lighted by the brighter ray of our time. What promise for us is yet concealed beyond our vision is now unknown. Let us not with Faust say:

> "Raise not the bolt that Nature guards,
> For she, inscrutable in open day,
> Alloweth none her veil to rend away."

GRADUATED SUSPENSION AS USED IN THE TREATMENT OF SPINAL DISEASE.

BY C. L. SQUIRE, M.D., ELMIRA, N. Y.

[FOR ALBANY MEDICAL ANNALS.]

In a recent paper on this subject,* I have stated my views on the plaster jacket treatment. I have employed it in my practice, and, like many other men, I have had varied experience. In all of my cases I have been able to continue the treatment to the end. Therefore, I feel justified in drawing the following conclusions as the result of my clinical observations:

First. Old cases of angular curvature — and by these I mean patients that have recently recovered with a deformity which has made no impression on the general health — should be dissuaded from employing the treatment for overcoming the deformity, as experience has shown that it is not often attended with the desired result.

The same may be said of ancient cases of rotary lateral curvature, unless the patients are children.

Second. The treatment may by practiced in all cases of progressing disease and at any stage. A cure may be expected in Pott's disease in from six to sixteen months.

Recovery in rotary lateral curvature cannot be looked for much under three years. In either of the cases a jacket should be removed and a new one applied as often as every nine weeks.

Third. The plan for suspension should be vertical and one that will admit of graduating the amount of extending force to the toleration of the patient. I have found that my patients can endure a force equal to one-third of their weight, and scarcely more than this, without its producing the unpleasant symptoms of excitement, fainting, vomiting and cramps, the occurrence of which has too often curtailed the time desired for applying a jacket.

In order to carry out this principle, I use an apparatus which consists of a horizontal bar supported at its center from the ceiling. At the extremities of this bar are loops or attachments for the hands of the patient, and pulleys for the cords which support the seat. In the seat at each end is a pulley, also for the cords to play over. These cords, two in number, are attached by one end to the horizontal bar, and, after including the system of pulleys, are fastened by the other end to the usual head gear, as may be better understood by referring to the accompanying illustration.

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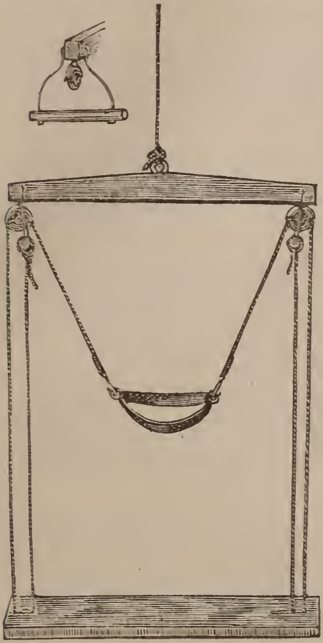
* Read before the Central District Branch Medical Association, Syracuse, June 9, 1885.



In the use of this swing, the patient must be able to reach the handles with his hands while his arms are at right angles with his body. The head gear must be adjusted about the chin and occiput; then by lifting himself clear from the floor by his hold on the handles he can seat himself in the swing; removing his grasp now from the handles, one-third of the weight comes upon the chin and occiput, while the remaining two-thirds, which practically is found to have been a dead weight, is supported by the seat of the swing. I may add that by this process the spine will be simply straightened and not stretched. Measurements taken before and after treatment by this mode of extension and the application of the plaster jacket have shown an increase in height for the patient of one inch in a recent case. Every time a jacket is applied it is attended with a little increase in height over the former measurement, while the extending force is every time the same, but a far greater advantage is obtained in the length of time the patient can remain suspended, which may be, as some have expressed it, for an hour at a time.

The main idea which I have desired to present in what I have said is this: It is not necessary nor best to use the whole weight of the body to extend the diseased vertebral column. About one-third of the weight of the body is sufficient extending force for all surgical purposes. The apparatus which I have here briefly described accomplishes this result, and relieves the patient from all the inconveniences and hardships of the ordinary methods of suspension.

ABSTRACTA.

LIFE-LIKE expression to the eyes of dead bodies is restored by placing a few drops of glycerine and water on the cornea.—*Med. and Surg. Reporter.*

GALACTAGOGUE.—(*N. C. Med Jour.*) Eating oranges caused an abundant supply of milk in a patient who previously gave no milk, and whose child was fed artificially.—*Weekly Med. Rev.*

NAPHTHALINE FOR OLD ULCERS.—(Dovodtchikoff in *Vratch*). Dust on thrice daily; wash the old dressing off before each new dressing; cover the ulcer with oiled silk.—*St. Louis Med. and Surg. Jour.*

SWAMP BUTTON BUSH (*Cephalanthus occidentalis*) for poisons of all kinds, especially *Rhus tox.* Make a strong tea and freely bathe the parts with it while hot.—*Dr. S. P. Hibbard, Taunton, Mass.; Medical Record*, Sept. 5.

TAPE WORM.—Bernard Persch gives in the morning a drop of croton oil dissolved in chloroform, the solution mixed with an ounce of glycerine; at night a mild laxative.—*Rev. de Scien. Med.; St. Louis Med. and Surg. Jour.*

EXTRA-UTERINE PREGNANCY.—Dr. Rennert, Frankfort-on-the-Main (*Pacif. M. and S. Jour.*), destroyed a fifth month fœtus by hypodermic of half a grain of morphine through the abdominal wall of the mother into the fœtal head.—*Weekly Med. Rev.*

THE BUST OF ÆSCULAPE.—A patient about to enter a doctor's office, seeing dimly the bronzed bust of Æsculapius within, was afraid to go further, and exclaimed in terror, "An' begorra, an' whut does the docthur have that nagur's head there fur!"

BIHYDROBROMATE OF QUINIA contains 60 per cent. of quinia and about 30 per cent. of bromine. It is even more soluble in water than the hydrobromate. Paccoud and other French authors obtain by bromine compounds of quinia a greater freedom from nervous symptoms in the cases treated. Dr. J. Maximowitsch (*Deutsche Med. Zeit.*, 64, 1885, p. 727) uses 2½ to 5 grains of hydrobromate in 16 minims of water hypodermatically. The minute crystals are yellowish-white; the solution in water is acid, and becomes greenish after a few days, without deterioration.—*Med. and Surg. Reporter*, Oct. 24.

Quillaya Bark as an Expectorant.—A tablespoonful of decoction, for an adult, Robert prefers to a dose of nauseating senega. The two glucosides which give value to senega are found in five times the quantity in the cheaper and pleasanter quillaya.—*St. Louis Med. and Surg. Jour.*

Pilocarpine in Alcoholic Insomnia.—Dr. A. B. Isham (*Med. News,* Sept. 19.) After a debauch the effect of one-third of a grain of muriate of pilocarpine is wonderful. It seems to lower the cerebral blood pressure, to eliminate the alcohol, and to increase the absorption of oxygen. After the sleep the patient arouses rational, and the repulsive facial aspect has passed away.

Oleoze.—One part each of oils of lavender, cloves, cinnamon, thyme, citron, mace and orange flowers, three parts balsam Peru, and two hundred and forty parts of spirits. One drachm of this added to two ounces of simple syrup will disguise the taste of one ounce of quinine.—*Med. and Surg. Reporter*, Oct. 24.

[This would be more credible if for "one ounce" we read *one drachm.*]

Agaricin in Night Sweats.—The most profuse hyperidrosis of phthisis is checked almost by magic with a single pill. According to Pribram (in the *Med. Chem. Centralblatt*) it operates by diminishing thirst and increasing the secretion of urine. The dose may be pushed to the extent of 1 grain in the course of twenty-four hours. The single dose for an adult is from $\frac{1}{8}$ to $\frac{1}{4}$ grain.—*National Druggist.*

Urethan, the new product of alkaloidal synthesis, is said by Professor Jaksch, of Jena, to be the coming pure hypnotic for infantile practice. Given in small doses to adults it is not reliable, but when administered in a dose of 15 grains, according to Merck, "it leaves nothing to be wished for." Professor Jaxsch says that the sleep produced by it is in all respects physiological, or normal.—*National Druggist.*

Baldness.—Those who wish to try the virtues of pilocarpine as a preventive of baldness are recommended by M. Vigier to try a pomade consisting of one part of the alkaloid in 200 parts of petrobaselin, the new colorless, inodorous, fluid substitute for vaseline. Use it instead of other dressings for the hair, to which it is said to give a glossiness that is unattainable by any other article of the sort.—*National Druggist.*

GASTRIC CATARRH.—Talma (*Pesther Medicinische-chirurgische Presse*) employs in all catarrhal affections of the stomach a weak, tepid solution (1: 750) of hydrochloric acid in water. This he instructs his patients to drink slowly after meals, taking as much as 20 or 24 ounces of the solution in the course of the day. Fatty foods and milk should be avoided, especially in chronic gastric catarrh, and in ulceration and cancer of the stomach.—*National Druggist.*

INHALATIONS OF OXYGEN IN PUERPERAL CONVULSIONS.—It It is known, says Holstein (*Gaz. méd de Paris; N. Y. Med. Jour.*), that oxygen has the property of enfeebling, or, to use a fashionable term, "inhibiting," exaggerated reflexes. On the strength of this fact, Professor Lachkiévitch, of Kharkow, lately proposed inhalations of oxygen in cases of puerperal eclampsia of reflex origin. In two consecutive cases Favre (*Wratch*), acting on the suggestion, has produced truly brilliant results. He is convinced that a bag of oxygen will soon be considered as indispensable in lying-in hospitals and obstetrical clinics as the forceps the cranioclast, and other like instruments.—*Weekly Med. Rev.*

SALICYLATE OF COCAINE IN THE TREATMENT OF TRIGEMINAL NEURALGIA.—Schneider (*Allg. med. Ctrl.-Ztg.; Ctrlbl. f. d. ges. Therap.*) relates the case of a woman in her third attack of neuralgia of the second and third branches of the trigeminus. The first attack, five years before, has been treated successfully with large doses of quinine. The second attack lasted almost six months; quinine was of no avail, but the pain gradually disappeared under the use of morphine and iron. The third attack had continued four weeks when the author injected salicylate of cocaine experimentally. The effect was extraordinary; six grains of the salicylate, injected into the cheek, caused the pain to disappear entirely, and occasioned a general feeling of well-being, wholly free from any unpleasant collateral phenomena. The injection itself was painless and did not give rise to irritation. The patient was enabled to sleep at night, although before the pain had been most severe at night. Eight such injections were given in the course of six days, and after that there was no pain, except at the site of the injections, which was overcome by three applications of galvanism with the anode applied to the seat of the pain and the cathode to the back of the neck.—*N. Y. Med. Jour.*

EXTRIPATION OF THE LUNG.—Dr. Domenico Biondi, of Naples, sometime since proved that animals recovered after removal, by operation, of one entire lung. In a more recent communication, published in the *Wiener Medizinische Jahrbücher*, he shows that animals may survive the removal of portions of lung artificially infected with tubercle. After injecting, by Ehrlich's method, masses of bacillus tuberculosis into the parenchyma of the lung, so that the clinical and anatomical symptoms of tubercle were produced, he removed, at the end of a few weeks, the diseased lungs; and in all cases recovery was complete.

NITRO-GLYCERINE IN INTERSTITIAL NEPHRITIS.—As opposed to the theory that a sufficient urinary excretion is kept up by the increased arterial pressure consequent upon the cardiac hypertrophy, Rossbach, (*Berl. Klin. Woch.; Union. Méd.*) adduces the results which he produced with nitro-glycerine in three cases of contracted kidney, in which the patients had increased arterial tension, albuminuric retinitis, uremic asthma, and general ill-health characteristic of generalized and advanced arterial sclerosis. In spite of the lowered tension produced by the drug, the uremic symptoms were diminished, the urine was increased in amount, the albuminuria became less evident, and the retinitis grew less marked and less troublesome.—*N. Y. Medical Journal.*

APOMORPHIA IN OBSTINATE NEUROSES.—Apomorphia, for a long time used only as an emetic, has recently been successfully applied to the treatment of obstinate neuroses (*Revue Medicale*). In chorea in a girl of thirteen, two injections, each about one-twenty-fifth grain, were given daily for three weeks, when the patient was discharged, cured. Another girl of the same age, subject to epileptiform convulsions, was given two injections of from one-twentieth to one-tenth grain, each day, the treatment being kept up for thirty eight days and resulting in a complete cure. A case of hiccough recurring from thirty to forty times a minute, and which was fast exhausting the patient, was cured by two hypodermatic injections. Morphia, atropia, and other drugs, had been tried without effect, as had also electrization of the phrenic.—*National Druggist.*

HYDROLEINE (Hydrated Oil) contains in each dose of two teaspoonfuls, cod liver oil 80 minims, water 35 minims, pancreatin 5 grains, soda $\frac{1}{3}$ gr., boric acid $\frac{1}{4}$ gr., hyocholic acid 1-20 gr.

Mercuric Bichloride in Enteric Fever.—W. Greifenberger (*Berliner Klinische Wochenschrift*, No. 38) concludes that abortion of typhoid fever with calomel is due to purgative action in first order; and that since repeated large doses of calomel cause no further evacuation, the subsequent influence of calomel is due to the disinfecting power of such portions of it as are converted into corrosive sublimate by the acidity of the gastric juice. As sublimate may be given at any stage without danger to the intestines, he has used a solution of one grain of corrosive sublimate and an ounce of simple syrup or of peppermint water, with sufficient water to make eight or ten ounces. Of this, one tablespoonful is given every hour or two, or about half of the above mixture in twenty-four hours. Infusion of digitalis, or morphine, may be added to the solution. The bowels may be regulated by castor oil or senna. While sublimate is given let the patients gargle frequently, and be fed with gruel and yolk of egg. The sublimate is usually given three or four days. Prostration was treated with tincture quinine and muriatic acid, camphor, ether-camphor, etc. Dr. G.'s success was remarkable. The method is cheap, simple, and better than mercurial inunction.

Ox-gall in Typhoid Fever.—Dr. George Van Schaick (*Quarterly Bulletin*) regards the tympanites, high fever and mental disturbances as largely due to changes in the liver, which result in diminution of secretion of bile. With this belief he tried ox-gall in enteric fever, the patients being fed on milk and fluid diet, which probably needs but little bile.

His first case was seen on the sixth day of the attack, at which time the morning temperature was 103 3-5° and the evening 105 3-5°. On the next day the eruption appeared, and the morning temperature was 103 4-5°. At 3: 30 P. M. he gave ʒ i pure gall in gelatine capsule, and at 4 P. M. fifteen minims more. The result was an evening temperature of 104°. After this he gave 1½ to 3 drachms of bile daily, and nothing else. The patient did well in every respect, her temperature never exceeding 103°, except on one day, when the butcher failed to get the bile, when it reached 105 3-5°. But it was immediately reduced upon the resumption of the drug.

In the second case the highest temperature reached was 104° on the eleventh day. The bile was pushed in this case to ℥ i daily, but no special result was observable, and the dose was again reduced to ʒ i three times daily.

In the third case antipyrine, quinine, cold affusions, etc., were used, but the tympanites, hebetude, weakened heart's action and a temperature of 105 1-5° soon showed the treatment useless, and bile was begun. The following day the evening temperature was 103 1-5°, and the patient continued to an excellent recovery.

Altogether the author was pleased with the results, though aware that three cases are not sufficient to establish the treatment over all others.

BOOKS, ETC.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, United States Army. Washington, D. C. Six portly volumes, A to Insfeldt.

MILK ANALYSIS AND INFANT FEEDING. A practical treatise on the examination of human and cow's milk, cream, condensed milk, etc., and directions as to the diet of infant feeding. By Arthur V. Meigs, M.D. Philadelphia: P. Blakiston, Son & Co. $1.00.

The name of Meigs is a good introduction to a book related to diseases of childhood. This little volume is written by a son of Dr. John Forsyth Meigs. The purpose which has had in view is very well indicated by the abstract of the title page given above. The methods and details of milk analysis occupy the larger part of the space. The most notable point is the conclusion that human milk contains very much less casein than has been estimated by other observers, and only amounting to about one per cent. This fact has an important bearing upon the composition of artificial food for infants. The following is finally recommended as infant food: Two teaspoonfuls of cream, one of milk, two of lime-water and three of sugar-water, made by dissolving seventeen and three-quarters drachms of milk sugar in a pint of water. The reasoning which leads up to these and other conclusions in the book are the details of very considerable work on the part of the author, and will be found both instructive and interesting. F. C. C.

REPRINTS, PAMPHLETS, ETC.

"Tracts on Massage." Translated from the German of Reibmayr, with notes. By Benjamin Lee, A.M., M.D., Ph.D., Philadelphia, Pa. 1885. No. II., "The Physiological Effects of Massage."

"Endometritis Fungosa." By James B. Hunter, M.D. Reprint from *The Medical Record*, New York, April 25, 1885.

"Insanity and Divorce," "A Case of Moral Insanity," "State Provision for Insane." By C. H. Hughes, M.D., St. Louis, Mo. Reprints from *The Alienist and Neurologist.*"

"Shall we Hang Insane who Commit Homicide?" Clark Bell, Esq., New York. Reprint from *Medico-Legal Journal*, New York.

A Memoir of Charles Hilton Fogge, M.D., late physician to Guy's Hospital; examiner in medicine in the University of London, etc. Printed for American distribution by P. Blakiston, Son & Co., medical publishers, Philadelphia.

"Voice in Singers." Read before the Ohio State Medical Society, June 4, 1885, by H, Von Klein, A.M., M.D., of Dayton, Ohio. Price 25 cents. Hann & Adair, printers, 26 North High street, Columbus, Ohio. "America has produced the greatest voices upon the face of the earth. The natural melody and sweetness in the tone of American women has charmed the world." "Tonsillotomy or uvulotomy has been undergone by all singers from Patti downwards."

Chautauqua Assembly Herald, published daily during Chautauqua Assembly meetings in August.

"Carbonate of Ammonia in Bread and Baking Powders." Eminent authorities of England, France, Germany and America.

Report of U. S. Dealers' Protective Association and Mercantile Agency, 68 Bible House, New York, 15 Tweddle Building, Albany, N. Y.

Household Primers. D. Lothrop & Co., Boston.

Dio Lewis' Nuggets. Vol. I., No. 1. Monthly, $1.00 a year. Dio Lewis Publishing Co., 69–71 Bible House, New York.

Lea Brothers & Co's (Late Henry C. Lea's Son & Co.) Classified Catalogue of Medical and Surgical Publications.

"Restriction and Prevention of Diphtheria, Scarlet Fever, Measles, Cholera and other Contagious or Infectious Diseases. Form 32, 1885. Department of Health, Brooklyn, N. Y. J. H. Raymond, M.D., commissioner of health. "Read this carefully, and preserve it for reference in the sick-room, reading it over when you have nothing better to do, and burn it when the case is terminated. Additional copies can be had on application."

Tolland County Leader, Rockville, Conn., with report of a case of dislocation of sixth cervical vertebra, June 29, 1885.

"Why the Action of the American Medical Association should be Endorsed." Reprint of Editorials from *The Journal of the American Medical Association*, and of correspondence relating to the proposed International Medical Congress of 1887. Also an endorsement of the American Medical Association, with 341 names of signers, all prominent physicians of Pennsylvania. These two circulars are issued by William H. Pancoast, William B. Atkinson, P. D. Keyser, Addinell Hewson, Henry Leffman, all of Philadelphia.

Alienist and Neurologist Editorials (July number), by C. H. Hughes, M.D., editor.

The Homœopathic Physician. Edited by Edmund J. Lee, M.D. Philadelphia: No. 129 South Thirteenth street. New York: A. L. Chittenden Publishing Co., publisher's agents. London: Alfred Heath & Co., 114 Ebury street, Eaton Square. 36 pp., 8vo, monthly, $2.50 a year.

ALBANY MEDICAL ANNALS:

A Journal of the Medical Society of the County of Albany.

EDITORIAL COMMITTEE:

F. C. CURTIS, M.D., A. VAN DER VEER, M.D., LORENZO HALE, M.D.,
JNO. BEN. STONEHOUSE, M.D., WILLIS G. TUCKER, M.D.

VOL. VI. NOVEMBER, 1885. NO. 11.

OBITUARY.

ALEXANDER SHILAND, M.D.

Physical decay and death approach the physician with as much certainty and relentless persistency as it does his lay brother in other walks of life.

By a system of false reasoning, due largely to the fact that his life-work consists in attempts to ward off the inevitable and to avert final dissolution, we unconsciously allow ourselves to think that, perhaps, by some unknown, mysterious force, the physician's days will be prolonged beyond the ordinary time, and only the full, ripe antumn of years will determine the event of his demise.

While death is absolute in its approach, its appearance, nevertheless, shocks our nature by the frequent abruptness of its grasp.

In a sense there is a grim appropriateness in the time of falling leaves for one to die. Having served their usefulness in nature, as they fall " sere and yellow " upon us and are trampled beneath our feet we look upon their work as being complete. So, when man goes in the early evening of declining years, we look upon his going as the completion of a matured life.

> "Leaves have their time to fall,
> And flowers to wither at the north wind's breath,
> And stars to set;—but all,
> Thou hast *all* seasons for thine own, O Death !"

Dr. Alexander Shiland was born in Cambridge, Washington county, N. Y., on the 6th of August, 1824. After an uneventful boyhood, he graduated from Union College in 1849, soon after entered the office of Dr. John Swinburne, and graduated from the Albany Medical College in 1853. In 1854 he was married to Miss Catherine V. Cramer, of Waterford, N. Y., who, with a daughter and two sons (one, Dr. J. C. Shiland) now survive him. He began the practice of medicine in Waterford in 1853. He remained there until 1856, when he removed to West Troy as the successor of Dr. Viele, and where he has since continued the practice of his profession until his death, which occurred after a brief illness, October 19, 1885, at the age of 61 years.

Dr. Shiland became a member of our county medical society in 1857, and has since held the office of vice-president and president, was a delegate to the American Medical Association, and has contributed several valuable papers to the society at its regular meetings.

While having a general practice, and desiring no specialty, his success as an obstetrician advanced his work in that direction.

It was the privilege of but few of his professional associates to intimately know Dr. Shiland. Unusually reserved in manner, extremely cautious and courteous in deportment, he thus not infrequently appeared to disadvantage, while others far inferior and more pretentious than he were apparently in the ascendancy.

To those, however, who did possess a close fellowship with him was revealed a mind clear, cultured and stored with information, both general and medical, to a remarkable degree. His reasoning was philosophical, and an inventive mind afforded him much recreation in the midst of professional care.

As a physician and Christian gentleman Dr. Shiland was essentially a true one. Devoted to his profession, he gave it his best endeavors, and was rewarded with a lucrative practice and an honorable and high standing in the estimation of the community in which he resided. A. T. VAN VRANKEN.

MINUTES OF THE SPECIAL MEETING OF THE MEDICAL SOCIETY TO TAKE ACTION ON THE DEATH OF DR. SHILAND.

A special meeting was held at the Albany Medical College, on October 20, at 4 P. M.

President B. U. Steenberg in the chair and the following members present: Drs. W. H. Bailey, Bartlett, Cook, Curtis, Hale, H. Hun, Lyons, W. J. Nellis, Perry, Scattergood, Stillman,. Van Allen, Van der Veer, Van Vranken and Ward.

President Steenberg announced the object of the meeting in the following appropriate words:

At the very threshold of our season of labor as a society we are called together to pay tribute and mourn the loss of one of our members. It is my sad duty to announce to you the death of Dr. Alexander Shiland, of West Troy, which event occurred October 19, 1885, at 5 o'clock P. M.

Dr. Shiland was an ex-president of this society, having served as president during the year 1880–81. I was not intimately acquainted with him, but so far as I knew him I believe him to have been an honest man and much devoted to the best interests and the advancement of his profession. There are others present who can better recount his virtues, portray his life and character, and relate the account of his illness and death.

He was followed by Dr. A. T. Van Vranken, of West Troy, who said that the usual routine of presenting resolutions seemed too formal for this occasion, and offered in their place the foregoing obituary as a substitute.

On motion of Dr. W. O. Stillman, the testimonial of Dr. Van Vranken was adopted as the expression of the society and ordered spread upon the minutes and a copy transmitted to the family of the deceased.

Dr. Van der Veer then expressed his regard for Dr. Shiland. He had known him for a number of years, and at the time of his own presidency of the society Dr. Shiland was vice-president. He had always found him courteous and refined, but diffident, and thought that one had to know him intimately to realize his worth. He was a good conversationalist, but preferred to give way to others, that he might remain an eager and interested listener. He was an earnest, thorough student, and drank deeply from the fountain of science, more from an innate love of study and desire to benefit mankind by his researches than from any expected pecuniary reward. To his patients he was very attentive and sympathetic, to his his brother physicians honorable and conscientious, and a good man in every sense—a man who will be sadly missed by his family, his friends and his medical associates.

Dr. W. H. Bailey then arose and said:

My acquaintance with Dr. Shiland began in the autumn of 1852. We were then fellow students at the Albany Medical College, and boarded at the same place. Mr. Shiland was quiet and retiring in his manners, and was not inclined to mingle with the other boarders. He was an attentive tudent, and his answers to the professors were alway prompt and correct. In his deportment he was gentlemanly and dignified, in conversation ready and intelligent. He possessed a clear mind well-stored with useful information. He was slow in forming friendships, but when his attachments were made he was true and not easily shaken. In his practice he was much beloved by his patients.

But, gentlemen, the mortality in the profession in our county has been particularly noticeable as compared with other counties in the state. I became a member of this society in 1854, and the members of that time that remain can be counted upon the fingers of one hand, and this number does not make half that have passed away.

On motion of Dr. D. H. Cook the meeting adjourned.

W. J. NELLIS, *Secretary.*

——IN the absence of copy of minutes of the annual meeting of October 13, this notice is printed to remind the members that it was voted that the subject considered in the annual president's address of Dr. J. D. Featherstonhaugh should be the topic for discussion at the first regular meeting in November. As the said address is printed in full in this number of the ALBANY MEDICAL ANNALS, members are requested to bring their November ANNALS with them to the next meeting.

MEDICAL NEWS.

MEDICAL SOCIETY OF OTSEGO COUNTY.

Quinine and Stimulants in Typhoid Fever.

The regular quarterly meeting of the Medical Society of Otsego County was held at the court house in the village of Cooperstown, October 20, 1885. The questions for discussion were, "What relation has Hemorrhage from the bowels and nose to the Prognosis in cases of Typhoid Fever?" and "What is the value of Quinine and Stimulants, either separately or jointly, in the Treatment of Typhoid Fever?"

The discussion of the first question developed the fact that individual experiences and opinions varied as differently and as widely as the opinions of the authors of our accepted text-books and those they quote.

As to the second question, there seemed to be considerable unanimity of opinion that, while quinine was useful, at least in small or medium tonic doses, and while few would feel justified in dispensing with it altogether in the treatment of a case of the disease, yet it was one of those remedies that should be given judiciously and upon general principles, and that the cases were few and far between, if, indeed, they ever occurred, when large doses were required.

It seemed to be the general practice to give stimulants more or less. That there is a period, or periods — in some instances the whole course of the disease may be denominated a period — when stimulants can be used, either to prevent death or hasten convalescence, is probably true. P.

NEW YORK SKIN AND CANCER HOSPITAL.

The New York Skin and Cancer Hospital has been unable to accommodate many who desired to avail themselves of its resources in their building on Thirty-fourth street. For this reason, and for the sake of economy, but mostly for the reason that the pure air of the country is very much better than that of the city for sick people, especially if they are to undergo operations, they some time since procured a location above High Bridge. Here seventeen acres of ground have been purchased, and on it cottage pavilions are being constructed. In a few weeks these will be completed, and in a lovely country location, with the best surroundings for healthfulness, all who apply can be provided for. This is doing well for an institution only three years old. It is almost the only one in the country exclusively devoted to this specialty, and ought to succeed, for it has some of the best men in New York on its medical staff and governing board. It must not be confounded with the New York Cancer Hospital. The latter has recently issued its annual report, but has yet some time to wait before its hospital building can be completed so that they can go to work. F. C. C.

NATIONAL ACADEMY OF SCIENCE.

The Board of Regents, Albany Institute, Albany Medical College, Union College, Dudley Observatory, Albany Law School, and other local organizations, have been coöperating to perfect plans for the reception and entertainment of the members of the National Academy of Science during the time of the Albany meeting, to be held November 10–14, in the Capitol. Chancellor Henry R. Pierson has been chosen chairman of the committees from these bodies, and David Murray, Ph.D., LL.D., secretary. At a meeting on Friday evening, October 30, Mr. Pierson, Dr. Murray, Judge Parker, Prof. Perkins, Dr. Homes, Mr. Ernest J. Miller, Dr. Willis G. Tucker, Dr. Albert Van der Veer, Mr. G. R. Howell, Mr. John Templeton, and others, were present. It was decided to give a public reception at Geoogical Hall, Tuesday evening, November 10, to which prominent citizens and scientific men from Union, Hamilton, Williams and Vassar Colleges and the Rensselaer Polytechnic Institute will be invited. Messrs. Murray, Tucker and Ward were appointed a committee on the reception, and Messrs. Templeton, Miller and Pierson on finance. Governor Hill will give a reception on Wednesday evening, and ex-Senator Abraham Lansing on Thursday evening.

The National Academy of Science is the first scientific organization in the country, and includes upon its roll of members nearly all the notable names in American science. Prof. James Hall is the only Albanian who is a member; at his suggestion the Albany Institute invited the Academy to meet in Albany. Prof. O. C. Marsh, of Yale College, is president, and Prof. Asaph Hall, of the National Observatory at Washington, is secretary. Among the eminent men expected are Prof. F. W. Putnam, of Cambridge, Mass., permanent secretary of the American Association for the Advancement of Science; Prof. Edward D. Cope, of Philadelphia; Prof. George F. Barker (Albany Medical College, 1863, honorary), for several years Professor of Chemistry in the Albany Medical College, and many others.

ALBANY COLLEGE OF PHARMACY.

The class of '86 elected the following officers October 19: President, O. M. Myers, Rochester; vice-president, John Coventry, Rochester; valedictorian, H. M. Sweet, Cohoes; recording secretary, H. Barringer, Hudson; corresponding secretary, Charles Hall, Mechanicville; treasurer, H. Pareira, Albany; executive committee, O. M. Myers, *ex-officio;* H. Gardner, Albany; John Cummings, Fabius; E. P. Welch, Cooperstown; Charles Rogers, Pittsfield. At the close of the election a pleasant supper was enjoyed by the class.

The freshmen of the Albany Medical College held their class meeting Thursday evening, October 16, and elected the following officers for the year: President, C. D. Rogers, Round Lake; vice-president, P. J. Archibald, Cohoes; secretary, F. T. Stannard, Troy; treasurer, E. E. Potter, Pownal, Vt.; marshal, W. H. Fox, Minaville; chaplain, P. R. Bradley, Albany.

Dr. T. L. Carroll, resident physician at the Almshouse, has been appointed surgeon on the United States revenue steamer "Bear" on her trip from New York to San Francisco. He sailed November 8.

Dr. Robert E. Fivey, class of '86, Albany Medical College, is the newly-appointed resident physician at the Albany County Almshouse.

Dr. J. F. Force (A. M. C., '71) has removed from Heron Lake, Minn., to 2128 North Dupont avenue, Minneapolis, Minn. Dr. Force is Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, and also Professor of Materia Medica and Botany in the Minnesota College of Pharmacy, the first school of pharmacy organized in Minnesota. Both of the above schools are located in Minneapolis.

ALBANY
MEDICAL ANNALS:
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VOL. VI. DECEMBER, 1885. NO. 12.

EDUCATIONAL AIMS AND METHODS.*

BY WILLIS G. TUCKER, M.D., ALBANY.
Albany Medical College, 1870.

Gentlemen :

The Albany College of Pharmacy opens its doors to-night, and with this evening enters upon its fifth lecture course. Looking back to that evening which seems not far away when we gathered here at the opening of our first session, we well recall the feelings of anxious anticipation which were inseparably connected with the occasion, and now, as we review the past and what has been already accomplished, and look forward to what, we trust, may hereafter be attained, it is with feelings of more than ordinary satisfaction and pleasure that we bid you welcome this evening, assuring you that no effort on our part shall be lacking to retain the confidence which you have reposed in us. Ever remember that you and the college are one—that your interests are our interests, and that the success of the school and the well-being of each can best be secured by a hearty coöperation. If you need counsel as to your work here, advice in any emergency, or assistance of any kind that we can give, we hope that you will ever feel that in coming to us you are seeking those who sympathize with you in every earnest endeavor you put forth to succeed in the work you have undertaken, and on our part we shall feel that in advising you and in directing your efforts you will believe that we are actuated only by the desire to serve you so far as we may and to the best of our abilities.

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* The introductory address of the fifth lecture course at the Albany College of Pharmacy, delivered October 5, 1885.

On such occasions as this it is quite customary to bring forward some topic of a scientific nature for consideration; but, without questioning the propriety of such a course, I do not propose to adopt it this evening. Labored discussions, or speculations upon unsettled problems, are too frequently devoid of practical interest and real value, and as the didactic lectures begin with to-morrow night, after which time there will be little opportunity for desultory discourse, I am going to take advantage of this occasion to give you some general hints and off-hand advice on a variety of subjects perhaps not very closely connected. I beg therefore that you will pardon the fragmentary nature of what I have to offer, remembering that with so small a faculty the privilege of addressing the class at the beginning of the session recurs so frequently that elaborate addresses, if indulged in, would probably consist in a mere ringing of the changes on the familiar bells whose last peal had scarce left off sounding on the air.

And first let me say something of courses of study and their object. The thoughtful man as he surveys the vast fields of knowledge which have been so profitably cultivated for centuries by the wisest of men, and views the abundant fruits gathered for our use from these well-tilled fields and stored in overflowing granaries, our great libraries or smaller collections of books, may well feel discouraged at the thought of how much is known and how little he can learn; but if he have within him the spirit of the true scholar, he will not be discouraged nor shrink from the task of appropriating—making really his own—those things which it is needful for him to know. And just here lies the whole gist of the matter. Having mastered those fundamental subjects which are essential aids in the acquisition of any higher or special branches of knowledge, the student should inquire what are the particular things which it is profitable for him to know, for these ought chiefly to concern him, and if they be followed aright their pursuit will lead him to the study of related subjects and prevent his confining himself to too narrow a range. The objection to the old-time courses of study in our colleges, like the the objection to most set courses of reading is that they assume a knowledge of certain subjects to be essential to all persons desirous of obtaining an education. Doubtless a knowledge of some subjects is, and these we may denominate elementary, though we do not mean primary alone; but with the widening of the field and the constant enlargement of the horizon, we hold that the courses of instruction in different departments of study should begin to diverge at a point nearer the beginnings of knowledge, and that often much time is wasted in the acquisition of things which have no bearing upon the life work of the individual. And this fact, for I will assume it to be such, is coming to be recognized by instructors more and more, and the general adoption of better educational systems is chiefly hindered by a too conservative clinging to certain antiquated notions as to what *ought* to constitute an education. The study of dead languages, for instance, which is doubtless necessary to open to us great mines of wealth in certain directions, is not essential to those who expect to dig for treasures of another kind. Emerson, though a good classical scholar, preferred always to read translations of the Greek and Latin authors, and one must devote a life-time almost to the study of these languages to be able to read them critically or even profitably. We hear much nonsense talked about the satisfaction to be derived from reading the original texts by those who possess the usual smattering only of these languages, and all this on the part of such is sheer affectation. In one sense, of course, all knowledge is valuable, but this value is relative; and since but a comparatively small amount of the sum total can be acquired by any one person, each student should seek that which he is by nature best fitted to acquire, and which will be of most real service to him. Knowledge is but a means to an end, else would a learned man be no better than a cyclopædia. To be learned is not necessarily to be educated in the truest sense, and to be educated does not of necessity make life valuable to one's self or to the world. A man may be a miser though poor in this world's goods, for of what value is the most profound knowledge if it be not used aright—if it be not put out to usury, that it may increase the intellectual or material wealth of the world. If we but absorb that which others also know—if we add nothing, give out nothing, and turn our knowledge to no practical ends, we are but cumberers of the ground, and the world is no better that we have lived in it. I will not waste words with those who prate of the value of knowledge for its own sake, for I take it with Matthew Arnold that conduct is three-fourths of life, and that however pleasing and self-complacent may be the feelings of those who are ever gathering, but never using or dispensing knowledge, they are as parsimonious with their intellectual wealth as is the miser with the gold which he values for itself alone, and never for the good that it may do. We are to live not to ourselves only, but to benefit our fellows, and the recluse whose life is passed in the seclusion of his study may dream dreams and experience emotions, but these are valueless in proportion to the poverty of the results which they bring forth.

Now, the three chief directions in which knowledge may be made valuable have been indicated in what has been said. They are, first, research, or the using of old facts in the acquisition of new ones; second, instruction, or the communication of that which has been acquired to others; and, third, its practical application to the varied occupations of life. Let us briefly consider each of these.

Original research is one of the noblest pursuits in which man may engage. To add to the world's knowledge by the discovery of new truths requires the exercise of the finest powers. The investigator must be acquainted with the known to the furthest confines in the direction his researches take, and must be trained to habits of observation and experimental demonstration when this method of proof can be applied. He must possess a mind capable of concentration and the exercise of the reasoning powers; be trained to trace effects to causes; to connect apparently unrelated facts; to establish logical deductions, and to avoid hasty generalizations. Galileo and Kepler, Newton and Humboldt, Lavoisier and Davy, have possessed these qualities, and the discoveries made by them mark great epochs in the history of the development of the physical sciences—have established some of them. And time would fail to tell of others, their equals, and hundreds of lesser lights and living workers who are as earnest in their search for truth, in their study of nature, as were these intellectual giants. Let no one underrate their efforts or count the success by the money value of their discoveries, for there is no fact so insignificant but it may be a link in some great chain and be all-important in some connection yet unseen. "Science," says Plato in the Republic, "has for its province to know the nature of the existent." What could be broader, simpler! And in response to an inquiry by Glaucon as to whom he calls genuine philosophers he replies, "those who love to see truth." Is any aspiration nobler! Then let us honor those men, who, careless often of material comforts, devote their lives to a study of nature and the solving of her mysteries. Such men may be brought before the inquisition like Galileo, or be upbraided, ridiculed and condemned like Darwin; for, though of them the world was not worthy, assuredly they shall have their reward, and their works shall follow them. To him who reads aright the history of the development of science nothing can be more disheartening than the modern spirit of scepticism which constantly inquires as to the practical utility and real value of scientific discoveries. Such a spirit was pardonable, perhaps—at least was not unnatural—three or four centuries ago, but it is excusable no longer; and it is greatly to be regretted that in our own country the general and state governments do not, to a greater degree, encourage and promote scientific research, for there is much work so extensive in its scope and so costly to prosecute that without state aid it can scarcely be undertaken. Our own national government has, it is true, through its different scientific bureaus, surveys and commissions, accomplished much in various directions; but too frequently such work has been interrupted by political interference, and the efficiency of these bureaus seriously impaired; and, while some of the states have made ample appropriations for the furtherance of scientific investigations, politics have too frequently been mixed in with science, to the serious detriment of the latter.

Now, concerning the relations of educational methods to the advancement of knowledge, we have not time particularly to speak; and, indeed, if we consider the education of the masses, the question need scarcely be discussed, for the number of those who devote themselves to original research is exceedingly small. Given the mind and the ambition, and abundant opportunities exist for the aspirant to secure the training necessary to the work. Incentives even are offered to ambitious workers, and there are constantly widening fields waiting to be tilled, and capable of yielding abundant harvests; but he who aspires to work in these must early begin and tirelessly strive, for no ordinary attainments will suffice, and extraordinary exertions only will receive the reward.

Instruction we cited as the second direction in which knowledge may be made valuable. The conscientious teacher occupies a less exalted place than the original investigator, but he is, nevertheless, or should be, much more than a mere retailer of information. The less mechanical he is, the better teacher he is. Merely to absorb ideas as a sponge takes up water, and squeeze them out upon one's pupils, careless of how much sticks or how much runs off, is not to teach. There are few sights more distressing to witness than the teacher who knows no more of his subject than he strives to impart to his pupils, and whose labors are of necessity mechanical, perfunctory and method-lacking. The true teacher should know all around his subject—it should be transparent to him as glass, so that he may view it on all sides and so present it to his pupils that they will perceive a method in their work and the development of a plan as they pursue their course. His mind must be abundantly stored with facts for the illustration and elucidation of his subject, and, while he must know much more than he expects to teach, he must not confound his pupils by a display of his superior wisdom, but must make use of his greater knowledge to place before them in the clearest light the salient points relating to their work, and to show them how the lesser facts are related to these. Thus will he save them much useless labor by ordering their work aright, and teaching them to discriminate between the essential facts and the less important particulars. He will teach them what to learn and where to look hereafter for that which needs not to be learned at present. The difference between routine teaching and philosophical instruction, therefore, is vast, the latter requiring not only a broad knowledge of the matter taught, but an acquaintance with many subjects more or less closely related thereto. No single language can be taught well without a knowledge of some others of common origin, and no one of the natural sciences can be taught properly by one ignorant of other branches related to it, any more than history could be taught without a knowledge of geography, or rhetoric by one not versed in literature. Much, then, is required of the teacher, and above all must he grow with his subject, for in these days of rapid advance he who stands still will soon be left behind, and the instructor who wakes up some day to find that his pupils lead him in the race is in a sorry predicament indeed.

As the third direction in which knowledge may be rendered valuable we instanced its practical application to the every-day affairs of life, and, though last named, I think you will agree with me that in many respects it is the most important. What would a general be without an army or a government without subjects! The commander of a nation's forces or the ruler of a great people gets the glory, but it is the people who make the history. And so the work of the world to-day is done not by discoverers and investigators, not by scholars and instructors, but by the great rank and file of workaday men—men often neither original, brilliant nor profound. The number of those great geniuses who add to the world's knowledge, who originate ideas, create philosophies, or produce lasting works in literature or art, is small, as is also the number of those modern Gamaliels who so teach as to make much impress through their pupils upon their times. The great majority of active workers in the world to-day use the knowledge they have acquired for the obtaining of a livelihood, which is true alike in the learned professions and in the business world, and when what has been said concerning the value of original research and the nobility of the teacher's calling is considered, I am sure that this statement will not be misunderstood; and if it be so, then a most important question with instructors should be how they may best educate their pupils that they may succeed in the practical affairs of life. Opportunities always exist for the exceptionally able ones to perfect themselves in those branches of learning which the average pupil has no need to pursue, and we repeat that it is a fundamental error to suppose that all pupils in our schools and colleges need to be instructed in branches which bear so little upon the work of life as to be capable of rendering them no real service, if, indeed, they do not work them an injury by diverting their minds from a more thorough study of those subjects which are essential. I believe that the ordinary academic course is not well adapted to the wants of the majority of those who pursue it, and that our higher institutions of learning should provide a greater number of courses in the different departments, and each with some especial end in view. The establishment of technical schools for the instruction of artisans is a step in the right direction, and of late many of our colleges have materially modified the old-time curriculum. We hear much high-flown talk about the desirability of a liberal education, but it is well to remember that a man ought to know best those things which pertain to his calling. Not to know these is a reproach to him, but he need never be ashamed to confess that there are wide fields of knowledge lying outside his province which he has not explored. A mere smattering of these things will be of no real service to him and give him no claim to distinction. The whole tendency in these days is, and from the very nature of things must be, toward specialties in business and in the professions, and practical men know full well that when exact knowledge is wanted they must look to specialists for it. Spite of all said to the contrary, no one esteems a naturalist the less because he knows no Hebrew, or a financier because he knows little of science. It would be well if these facts were better appreciated by those into whose hands we commit the training of our youth.

Now, all this applies very expressly to you and to the direction which your studies should take. Let us hope that you have come here with a well-settled purpose and agreeably to an inclination long felt, and that your preliminary studies have been directed with a view to your present pursuits. If so, devote yourselves assiduously to those things which concern you as pharmacists. They are chiefly embraced in the curriculum of such schools as this, though the course of study is by no means so extened and so thorough as we trust in time our schools will adopt; and there are few among you, probably, who will not find that individual needs necessitate the study of certain subjects, elementary in their nature, very possibly, which are not included in the course marked out for you here. Study such subjects so far as may be necessary for you to pursue matters related to them with advantage. Strive clearly to ascertain what things your business requires you to know, and learn as much of these as your time and abilities will permit. Do not allow outside matters to take your attention off from the weightier, the really essential, subjects. For you to know some Latin is well, or French and German, but you have not come here to study languages, and they are not as important to you at this time as other things; so let them alone and avoid having too many irons in the fire. Give your time and attention to essentials first and take up the non-essentials afterward. In thus advising you we at the outset assumed that you are here with a well-settled purpose, and, if so, providing you will persevere, you have every reason to look for success; but if the last few years have been listlessly spent, with no special aim in view—if you have tried this thing and that and now taken up a new subject, attracted by its novelty, you have no right to expect to succeed. But, having a fixed purpose, if you are persevering and honest, in the broadest sense, you *ought* to reach the goal you have set, and leave behind you in the race many contestants who may be more brilliant, showy or versatile, but who are less persevering than you. It is the staying qualities that in most cases insure success.

And now, after these general considerations, a few words of more particular advice. Concerning lectures, we advise you to attend all, if practicable, and especially should the juniors attend those delivered to the senior class. Take careful notes of the lectures, particularly of those to your own class, and use these in your study, for we assume that you will devote as much time as you can each day to thoughtful study. In taking notes make no attempt at word-for-word reporting, but get down the outline, the frame-work, of the lecture, with the principal definitions, formulæ and experimental demonstrations. Waste no time in copying these notes, but go to your books with them, following up each subject and mastering it so far as you can. Have pencil and paper at hand and calculate problems which have been under discussion, write out your equations, and carefully study and practice all the details of prescription writing, and the like. Take down from the shelves specimens of any substance that you may be studying, and no matter how familiar you may deem it to be, examine it again as you read its description from your book. Use a lens when necessary to examine structure, and if a chemical test be required, apply it, and repeat the performance till you *know* it thoroughly and are familiar with each detail. If you fail, seek the solution of the difficulty, turning to your books of reference and digging out of them the information that you need. Believe me, if you work in this way you will become interested in every subject you study, and the knowledge you so gain you will probably retain, but if you set for yourself a task, saying to-day I will read so many pages on this subject and to-morrow so many on that, your interest will flag, and little of what you read will be retained. Work up one thing at a time, objectively, in the manner described, if possible, and give to it your undivided attention till you feel that it is mastered.

What I have said implies the necessity of your learning properly to use books. Some books, a few only, need to be read and re-read from first to last, but the greater number are to be used for reference only, and the sooner you acquire the habit of consulting these and rapidly extracting from them just what you need, the better progress will you make in your studies. The art of reading with the fingers, rapidly turning over the leaves and instinctively, almost, lighting upon the fact sought, is a knack which most students can acquire and which all ought to cultivate. "The art of reading," says Hamerton in his "Intellectual Life," "is to skip judiciously. Whole libraries may be skipped in these days when we have the results of them in our modern culture, without going over the ground again. And even of the books we decide to read there are almost always large portions which do not concern us and which we are sure to forget the day after we have read them. The art is to skip all that does not concern us, whilst missing nothing that we really need. No external guidance can teach us this, for nobody but ourselves can guess what the needs of our intellect may be. But let us select with decisive firmness independently of other people's advice, independently of the authority of custom." In buying books of reference let me advise you always to look for the index, and, other things being equal, to select those which have the fullest and best. The indices in our two dispensatories are so full as to be almost concordances, and they save us much time in hunting sometimes for very smalll needles in these great hay-stacks. Many English books have a table of contents, but no index.

One habit which it is very necessary for you to acquire is accuracy. Strive to be exact in all you do and say and write. This characteristic should be possessed by all educated persons, but it is especially necessary for you. Strive to acquire it. When looking up any fact, make sure you have obtained the information you sought: keep written memoranda of all things necessary; read over carefully everything you write before parting with it; keep all articles labelled fully and precisely; read the labels on all bottles again after using and before you replace them; check off each article that enters into a prescription as you use it, and revise the whole before you dispense it; count over all weights as you take them off the scale pan, and in all things be accurate and precise. A single error on your part may ruin your reputation—perhaps destroy a life. Be accurate in deed not only, but in speech as well. Avoid careless and exaggerated statements; the repetition of things on mere hearsay and the hasty expression of opinions. Be accurate, precise, punctual in all you do, and no less cautious in all you say. These qualities will assuredly stand you in good stead.

The subject of food and drug adulteration is one which should receive a share of your attention. Fortunately many such adulterations are comparatively harmless, consisting in the addition of diluents or make-weights or in the coloring or manipulation of an article, by which it is made to appear better than it really is, more frequently than in the employment of deleterious or positively harmful constituents, though in the case of drugs, if such sophistication reduces the strength of the article, much harm may be done. Competition and better methods in trade have of late resulted in a great improvement in the quality of the crude drugs as sold in the market and the sale of inferior, damaged or falsified articles is by no means as common as it was a few years ago, so that in dealing with respectable houses you may feel tolerably certain of being supplied with good goods. The same is true of manufactured chemicals, and if you are informed as to the different grades and do not look always for the cheapest, you run little risk of being imposed upon. You ought not, however, in all cases to accept implicitly the seller's guarantee, but should familiarize yourselves with the physical properties and recognized tests by which strength and purity may be determined and apply these whenever you believe it necessary, but in such work be very cautious, as most processes for assaying drugs are difficult, and nearly all the tests for purity require considerable skill in their application. Avoid slip-shod work and hasty conclusions thereform. Concerning the adulteration of foods, while it is a fact that poisonous coloring matters and other harmful substances are not infrequently employed, the fraud more commonly consists in the use of make-weights or the removal of some valuable constituent. Common starches are substituted for real arrowroot; flour is added in undue quantity to mustard; all kinds of inert substances are mixed with ground spices; jams and jellies are made from the cheapest fruit obtainable and seldom from that pictured on the label; ground coffee is too largely composed of chicory; grape sugar replaces cane sugar wherever practicable, and so on to the end of the chapter. All these are frauds and should be exposed and prohibited, but they work their greatest harm to the pocket of the consumer, and we must not believe all that we read in the papers concerning the indiscriminate use of poisons in the preparation of food articles, for much of this is quite false or very greatly exaggerated.

Hard-working men are often advised to have a hobby—something quite outside their ordinary line of work—to which they may devote spare moments by way of relaxation from the routine affairs which occupy the greater portion of their time, and I think the advice is good. Your real hard worker does not care much for frivolous amusements. They do not as a rule interest or even amuse him, but he can find real relief in some occupation which, while it calls for thought, does so in a new direction. In this way his mind unbends; the ordinary labor is thrown aside, and that which entertains him, and is at the same time not unprofitable, he pursues with pleasure, for a really busy man does not like to feel that he is wasting time. The number of hobbies is almost without limit. There is microscopy, geology or botany—indeed, almost any of the natural sciences, and especially those in which collections can be made; the gathering of coins or autographs; genealogical or local historical researches; the study of some language or literature or the works of some author. Any one of these, or other like subjects, pursued at odd times will serve not only to divert from the dull round of daily cares, but to afford much useful information as well.

And now, allow me in conclusion to express the hope that you may so pursue your studies here that when the end of the term, when the end of your course, shall come, you may look back upon the time here spent with satisfaction, feeling that no valuable time has been wasted, no opportunities neglected, no good resolutions abandoned. Restrain those inclinations which tend to draw you from the path of duty; cultivate the habit of self-control; learn to work assiduously, cheerfully, for so will you find that work is a pleasure, and resolve each day manfully to do those things which duty bids you do, however disagreeable or humble they may be, and you will find your reward in the satisfaction that comes from the sense of duty well-done, true progress made, victories achieved. Gentlemen, we bid you welcome.

CASE OF SCIRRHUS OF BOTH MAMMARY GLANDS—EXCISION.

BY LINZEE T. MORRILL, M.D., GEORGETOWN, COLO.
Albany Medical College, 1873.

[FOR ALBANY MEDICAL ANNALS.]

The patient was Mrs. Olson; age 39; medium height; weight about 110 pounds. Had been married nineteen years; mother of two children; one died at the age of four weeks; the last child, a girl, is living, age five years. The mother, three sisters and two brothers are in Sweden, in good health. Eighteen months ago a small lump was noticed under the left nipple; three months later a similar tumor was detected on the right side. From that time until September 18, 1885, the patient suffered considerable pain, and had consulted different physicians in Colorado, who advised everything with the exception of excision. On September 18, 1885, Dr. J. M. Miller examined her at Cottonwood Forks, and advised excision. On September 21, I went to Cottonwood Forks (sixteen miles from Georgetown and three miles from Idaho Springs), and operated at 10:30 A. M., Dr. J. M. Miller administering the anæsthetic and Dr. Dunning, and Mr. Rice, medical student, assisting. Both glands were removed entire, with but very little hemorrhage. The wounds were dressed and patient put to bed at 11:15.

The right gland was removed first, by elliptical incision; edges of wound approximated nicely. Left gland removed, with the entire integument, which was discolored, and a portion of involved pectoralis major muscle; the tumor from the left side is much larger than from right side. Sutures, plasters and gauze were applied on right side, and a simple gauze dressing, with carbolized water, on left side. 12 M., has not rallied from shock; radial pulse cannot be detected; action of heart very weak. 12:30 P. M., slight radial pulsation; have administered quite freely of spiritus frumenti; Drs. Miller, Dunning and student Rice have started for home. 1 P. M., condition very bad indeed; almost impossible to distinguish heart's action; gave spiritus frumenti hypodermatically quite frequently until 2 P. M., also hot punch internally; ordered hot bricks and flannels to feet and abdomen. 2:15 P. M., slight radial pulsation. 2:30

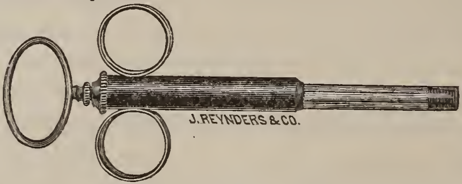
P. M., condition the same. 3 P. M., radial pulse can be detected; up to this time a cold, clammy perspiration over head and body; respiration very faint. 2 : 30 P. M., has just opened her eyes and inquired for Dr. Miller; pulsation slightly increased in force. 4 P. M., has made inquiries in regard to her child; complains intensely of thirst; she has used up to this time one pint of spiritus frumenti. 4 : 30 P. M., ordered rice water for thirst; I am still unable to count the pulse, but think it improving; she complains of being tired and yawns frequently. 6 P. M., pulse 140, the first I have been able to count; she complains of nausea, probably from vinegar and water which I allowed; dressings stained with blood from slight venous hemorrhage. 7 P. M., pulse 120; complains of severe pain in knee joint, running down toward ankle; gave ¼ gr. of morphia sulphate; patient drank some more milk; 11 : 30 P. M., has had a a severe attack of vomiting; has slept since 9 P. M. September 22, 6 A. M., free from pain and has slept some; ordered some oatmeal gruel and half a cup of coffee. 9 A. M., have just removed dressings on left side; wound looks healthy and clean; right side shows no inflammation whatever; there has been no hemorrhage to speak of; pulse 120; 8 P. M., sent for in haste; found patient in a sinking condition from collapse; no hemorrhage; ordered spiritus frumenti *ad libitum.* 10 P. M., pulse fair and firm; ordered 1-6 gr. of sulphate of morphia. 12 M., has slept two hours; September 23, 2 A. M., pulse 175; has just drank some warm milk. 6 A. M., pulse 120; had taken 1-6 gr. of sulphate of morphia at 4 A. M.; feels very comfortable. 10 A. M., pulse 125; renewed dressings, both sides looking very favorable; removed ligatures and several sutures; reapplied carbolized dressings; patient has some symptoms of traumatic fever; ordered two grains of sulphate of quinine every hour. 3 P. M., has taken quinine regularly; slept two hours, and for the past two hours has vomited considerable dark-brown watery fluid; no pain; complains of a fullness in the rectum; ordered an enema of luke-warm suds, with no effect; bowels have not moved since the operation, but urine has passed regularly. 6 P. M., vomiting still continues at intervals of five to ten minutes, the fluid resembting coffee in color and substance. I have reason to suspect malignant trouble of the stomach. Impossible to find any pulsation. Discontinued every thing but the stimulants, which will not remain in the stomach long enough to be of benefit. September 24, 5 A. M., patient dead; had vomited incessantly up to two hours before death; was perfectly conscious until within the last hour of life.

Post-mortem, half an hour after death. Examined only abdominal organs. Intestines and stomach filled only with dark-brown fluid. Liver covered with irregular whitish patches; substance of liver quite hard and contracted. Pancreas about half its natural size and extremely hard. The entire rectum for eight inches presented evidence of malignant trouble; there was just sufficient opening to admit a pipe stem. Owing to being disturbed, I did not have time to examine the uterus. Internal surface of stomach gave evidence of an inflamed condition, and was also studded with very minute points of ulceration, some places showing that both coats of the organ had been ulcerated through; on the anterior portion of the internal surface a tear was found extending some six inches, which cannot be accounted for in any way; it was not made with the knife, for the organ was removed very carefully, being ligated at both ends and quite distended with fluid. Upon reaching home I opened the stomach carefully with blunt-pointed shears, and the line of partial rupture was on the under side away from the shears. The discharge from the mouth was at no time accompanied by any exertion on the part of the patient. The fluid seemed to flow out without any muscular contraction. I think that sufficient trouble was found in the stomach to cause the incessant vomiting, but of the malignancy of other organs we had no information whatever until the post-mortem. The wound on the right side healed very firmly by first intention. Patient lived sixty-six hours after operation.

PASTEUR'S CURE OF HYDROPHOBIA.—Joseph Meister had on his person fourteen bites, made by a dog known to be mad. Sixty hours after the accident, the first inoculation, a half Pravaz syringeful, was made with a marrow about sixteen days old, on July 1. In the space of ten days, thirteen inoculations with more and more virulent marrows were made. On the last day—the 16th of July—a marrow was used which had been prepared the evening before. As a parallel experience, Pasteur inoculated a series of rabbits with the same marrows as were used in the case of young Meister. The last inoculation was designed to limit the period of incubation. The patient remains in perfect health.

ABSTRACTA.

A Powder Introducer.*—By T. F. C. Van Allen, M.D., Albany, N. Y. Where it is desired to introduce a quantity of absorptive powder into the external auditory canal in the treatment of purulent otitis, a powder-blower is certainly an unsatisfactory apparatus to use. After using various contrivances I had an instrument made for me, and after employing it in both private and hospital practice for more than a year, I can say that it is very satisfactory.



This powder introducer consists of a small glass tube suitably connected with a piston. To charge it, the piston is withdrawn to the full extent, and the tubular end is plunged into a shallow, wide-mouthed bottle containing the powder, which readily crowds up into the tube, the air escaping from a vent-hole at the upper portion. Thus charged the instrument is introduced a short distance within the meatus, and powder pushed into the canal by pressing the piston. By varying manipulation the powder can be packed firmly or loosely.—*Med. Record*, Oct. 24.

Induction of Premature Labor.—Dr. T. Gaillard Thomas (*Physician and Surgeon*): The patient is placed with the buttocks near the edge of the bed, and under her is arranged a rubber cloth in such a way as to drain into a tub on the floor, in which are one or two gallons of water at a temperature of 98° F. The knees of the patient being properly supported, a long nozzle is carried into the cervical canal, and a steady stream of water is directed against the membranes. When dilatation to the extent of a half dollar is completed, which will be in the course of ten minutes, a gum catheter is inserted between the membranes and uterine walls, the patient is put to bed, and the labor allowed to proceed naturally. Dr. Thomas says he can point to two dozen children in New York city whose lives were saved by this operation.—*Ind. Med. Jour.*

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* Made by J. Reynders & Co., 303 Fourth avenue, New York city.

"COMPOUND OXYGEN TREATMENT."—William B. Clark, M.D., Indianapolis, Ind., in a printed letter to the medical profession, relates that for one hundred dollars he has bought what he believes to be the genuine Starkey & Palen formulas and apparatus. As he is under no promise not to divulge his information, he gives punctuation, spelling and capitalizing as in the original, as follows:

COMP. OXYGEN TREATMENT.

℞.	Nitrate Amonia	25 parts.
	Carbnate Ferri	1 part.

Mix Put in Retort, apply gentle heat, till whole Compound becomes to a boiling heat, then add heat gradually, and conduct Oxygen to the Tank.

HOME TREATMENT OF OXYGEN.

℞.	Nitrate Amonia	1 ounce.
	Chlorate Potassa	1 dram.
	Alcohol	2 ounces.
	Aqua Disliled	14 ounces.

Mix. one teaspoonfull to Inhaler full of hot water. Inhale 2 or 3 times a day.

The carbonate of iron is simply a bungling blind, for coloring. The treatment is, therefore, nothing but "laughing gas," although Starkey & Palen claim that it is not so. Since this gas is passed through three wash-bottles containing water only, the gas is impure; as nitrate of ammonia sometimes has muriate of ammonia in it, the dangerous chlorine may be evolved, so that one wash bottle should contain caustic potassa or soda to corral the chlorine; too much heat may drive over nitric oxide or even nitric acid; so one wash-bottle should have ferrous sulphate to stop them.

Another little fact: Practically there is no such thing as "Carbnate Ferri," for carbonate of iron almost at once changes to oxide of iron.

Pure nitrogen protoxide, nitrous oxide, dephlogisticated nitrous gas, paradise or laughing gas, is 36½ per cent. oxygen, has a *sweetish taste,* and three or four deep inhalations will sometimes produce anæsthesia. It is indisputable that nitrous oxide inhalations are sometimes beneficial.

Oxygen is *tasteless,* and may be respired a little while without uneasiness. But oxygen cannot be evolved from these treatments given; however, ten dollars a treatment has been evolved from the pockets of deluded victims.

Report of Illinois State Board of Health quarterly meeting, October 29–30, 1885, says: "Complaints continue to be received concerning the 'Compound Oxygen Treatment.' * * Whatever good there may be in causing their patrons to breathe more perfectly, is more than offset by the attendant quackery and downright lying.

Peroxide of Hydrogen in Suppurating Ears.—Dr. William A. Dayton, says: A spray of a four per cent. solution of the peroxide has had an almost magical effect in a case of ozena complicated with "proliferous" catarrh of the middle ears. Strong solutions induce local anæsthesia, often in a marked degree; besides, I have noticed that cocaine acted more promptly after the mucous membrane had been cleansed with the peroxide. If cleanliness is the desideratum in middle ear suppuration, then we have a servant *par excellence* in the peroxide of hydrogen.—*Archives of Otology.*

Cocaine Anæsthesia.—Dr. J. Leonard Corning (*N. Y. Med. Journal,* Sept. 19) shows that cocaine anæsthesia is prolonged by simply obstructing the circulation of blood from the anæsthetized area. Dr. M. J. Roberts (*N. Y. Med. Journal,* Oct. 24) has performed "femoral supra-condyloid osteotomy for genu-valgum" in a boy four years old, and an "excision of the hip-joint," both without pain, under superficial and deep injections of cocaine, the circulation being controlled by elastic bands.

Metric System Condemned.—Oscar Oldberg (*National Druggist,* St. Louis, Nov. 13) has for several years been an earnest and eminent advocate of the metric system. Now, after closer study, he is led to believe that the metric system does not fulfill the requirements of medicine and pharmacy, because of the inconvenient size of the units and the impossibility of binary subdivision. He writes that "our present apothecaries' weights and measures are preferable to the metric system with its unavoidable decimal fractions."

Small-Pox in Montreal.—The French Canadians "have no more fear of small-pox than we have of measles. When it appears in a neighborhood, the children are instantly exposed to the contagion in order to save them from its effects at maturity." "Vaccination they dread only as people dread an experiment."—*The Catholic Review.*

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Editorial Committee:

F. C. Curtis, M.D., A. Van der Veer, M.D., Lorenzo Hale, M.D.,
Jno. Ben. Stonehouse, M.D., Willis G. Tucker, M.D.

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ALBANY IN OUR EXCHANGES.

"Some Personal Observations on the Work of Lawson Tait," by Dr. Van der Veer, in *American Medical Digest*, New York, October, 1885, is extracted from the Albany Medical Annals for September. Part of the same article is in the *Maryland Medical Journal*, July 25.

"The Way to Prepare Surgical Sponges," in *Nashville Journal of Medicine and Surgery*, November, 1885, is from Dr. Van der Veer's article on "The Work of Lawson Tait," etc. See page 258, Albany Medical Annals, September, 1885.

"Sponge Tent Remaining Eight Days in the Uterus," in the *Medical and Surgical Reporter*, Philadelphia, November 14, 1885, reported by Dr. James P. Boyd, of Albany, is from the Albany Medical Annals, October, 1885.

"Diagnostic Value of the Tuning Fork in Diseases of the Ear," by Dr. T. F. C. Van Allen, in *Quarterly Epitome*, New York, September, 1885, is taken from Albany Medical Annals, June number.

"Ovulation and Menstruation," etc., by F. Townsend, M.D., Albany, in the *Quarterly Epitome*, New York, for June, is from the Albany Medical Annals, April, 1885.

"Lemons in Bright's Disease," by Dr. W. H. Boorn, A. M. C., class of '66, of Schenevus, in *Medical and Surgical Reporter*, Philadelphia, is from report of Otsego County Medical Society, Albany Medical Annals, May, 1885.

"Hygiene of Lying-in Chamber," *The Polyclinic*, Philadelphia, July 15, is from Vice-President Perry's (A. M. C., '75) address in ALBANY MEDICAL ANNALS, June, 1885.

"Bromine Inhalation in Croup," by Dr. George E. Gorham, in our March number, page 85, is noted in *Leonard's Illustrated Medical Journal*, Detroit, October, 1885.

"Alcoholic Paralysis," by Prof. H. Hun, Albany Medical College, in *American Medical Journal*, St. Louis, August, 1885. See ALBANY MEDICAL ANNALS, page 199, July, 1885.

——THE *Philadelphia Medical Times*, for reasons similar to those expressed on page 20, which led to the change from "THE MEDICAL ANNALS" to "ALBANY MEDICAL ANNALS," has decided not to drop "*Philadelphia*" from its title.

BOOKS, ETC.

BACTERIA. By G. M. Sternberg, M.D., F.R.M.S., Surgeon U. S. Army. Including one hundred and fifty pages from the work of Prof. Antoine Magnin, translated from the French in 1880. Illustrated by photo-micrographs, ten plates and twenty-nine cuts. Second edition, 498 pp., 8vo. Wm. Wood & Co., New York.

That the first edition of this work was so soon exhausted shows the interest this subject has, particularly for the medical profession. The present edition comes to us almost as a new work, in which Dr. Sternberg gives a careful *resumê* of the advance in experimental research up to the present time, only the chapter on the history, classisification and physiology of bactaria from the work of Dr. Magnin, constituting parts one and two, being retained in this edition.

The recognition of bacteria, methods of cultivation, staining, photographing, the different methods of attenuating virus, chemical reagents, etc., are given in part third.

In part fourth the subject of germicides and antiseptics is treated in a very careful and exhaustive manner, and one is glad to be set right in the use of the more common antiseptics in every-day use and to know that the faith in his experience is justified by scientific research. This part of the work possesses more interest from the fact that Dr. Sternberg's attention has been more particularly directed to this line of investigation for the last year or two.

Part fifth—bacteria in infectious diseases—a field in which the author has experimented largely, and in which Pasteur, Koch, Kline, Grawitz and others have attained a world-wide reputation, will perhaps be more interesting to the medical profession than any other part of the work.

Any one at all acquainted with the difficulties of photographing with high powers, particularly with immersion lenses, where the least jar will destroy a negative, as well as the difficulty of bringing the whole field into focus, will admire the heliotype reproduction of Dr. Sternberg's microphotographs in the present edition. There is an extended bibliography appended.

The work is produced with the usual neatness and taste of the Woods, and must of necessity find a place in the library of any one who wishes to keep pace with this line of investigation.

O. D. B.

LEONARD'S PHYSICIANS' POCKET DAY-BOOK. $1.00, postpaid. Illustrated Medical Journal Co., Detroit, Mich.

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THE PHYSICIANS' VISITING LIST (Lindsay & Blakiston) for 1886. Thirty-fifth year of its publication. Eleven variations in styles and sizes, varying in price from $1.00 to $3.00 each. P. Blakiston, Son & Co., successors to Lindsay & Blakiston, Philadelphia. See advertisement.

P. Blakiston, Son & Co. issue six different catalogues of medical publications, which will be sent free on application.

Letters from a Mother to a Mother on Children's Teeth. By the wife of a dentist, Mrs. M. W. J. Welch Dental Co., 1413 Filbert street, Philadelphia. 1885. 106 pp., 16mo, illustrated, paper cover, 25 cents.

REPRINTS, PAMPHLETS, ETC.

"How to Use Listerine" (illustrated). A formula book. A copy will be sent to physicians who request it. Lambert & Co., St. Louis.

American Public Health Association. Irving A. Watson, M.D., secretary, Concord, N. H. Thirteenth annual meeting, Washington, D. C., Tuesday to Friday, December 8–11, 1885, at Willard's Hotel Hall.

Annals of Surgery. 8vo, averaging 96 pp. monthly, $5.00 a year in advance. Edited by L. S. Pilcher, A.M., M.D., of Brooklyn, N. Y., and C. B. Keetley, F.R.C.S., of London, Eng., with many collaborators. Published by J. H. Chambers & Co., 405 North Third street, St. Louis, and by Bailliere, Tindall & Cox, 20 King William street, Strand, London. The contents may be divided into three classes—Original Contributions, Index of Surgical Progress, and Reviews of Books, and each class is of a superior order.

The Medical Press of Western New York. Buffalo, N. Y. Vol. I., No. 1, November 1885. 52 pp., 8vo, $2.00 a year. Roswell Park, M.D., 305 Delaware avenue, Buffalo, editor, assisted by Matthew D. Mann, M.D., Buffalo, Ely Van de Warker, M.D., Syracuse, W. J. Herriman, M.D., Rochester. Dr. A. M. Barker, business manager, 137 West Tupper street, Buffalo. Published by the Medical Press Association of Western New York.

The Physio-Medical Journal. George Hasty, M.D., editor and publisher, Indianapolis, Ind. 32 pp., 8vo, monthly, $1.50 a year.

The Georgia Eclectic Medical Journal. Edited by Jos. Adolphus, M.D., Atlanta, Ga. 40 pp., 8vo, monthly, $2.00 a year.

The Medical and Surgical Herald. J C. PeTit, M.D., editor and publisher, Joplin, Mo. 16 pp., 8vo, $1.00 a year.

Eastern Medical Journal. A. J. Marston, M.D., Worcester, Mass., C. E. Nelson, M.D. (formerly of *The Planet*), editors. 16 pp., 8vo, monthly, $1.00 a year. [Dr. Nelson has lately resigned.]

Courier of Health. Vol. I., No. 1, October, 1885. A popular monthly magazine. Courier of Health Co., publishers, St. Joseph, Mo. 32 pp., 8vo, $1.00 a year.

The American Pharmacist. Formerly *The Michigan Drug News*, Detroit, Mich. 24 pp., 4to, monthly, $1.00 a year.

The Formulary, Westfield, N. Y. 52 pp., 8vo, monthly, $1.00 a year.

The Archives of Dentistry, successor to *The Michigan Dental Journal*, also consolidated with the *New England Journal of Dentistry*. Published monthly by J. H. Chambers & Co., St. Louis, Mo., Chicago, Ill., Atlanta, Ga., for the Dental Journal Association. 48 pp., 8vo, $3.00 a year.

The Dental Advertiser. Published by the Buffalo Dental Manufacturing Co., Buffalo, N. Y. 32 pp., 8vo, quarterly, 50 cents a year.

The Dental Headlight. Ambrose Morrison, M.D., editor, Nashville, Tenn. 32 pp., 8vo, quarterly, 50 cents a year.

"Haven's Short-Hand Chart." Arranged especially for self-instruction, in twelve easy lessons. By Curtis Haven, Philadelphia, Pa., principal of Haven's Philadelphia College of Practical Phonography and Type-writing.

Illinois State Board of Health. Quarterly meeting, Springfield, October 29–30, 1885.

"Iritis: its Relation to the Rheumatic Diathesis, and its Treatment." By Charles J. Lundy, A.M., M.D., Detroit.

"Hereditary or Degenerative Ataxia." Six cases in one family; death of one case and autopsy. By W. Everett Smith, M.D., Framingham, U. S. A. Reprint from *Boston Medical and Surgical Journal*, Oct. 15, 1885.

Statement, on the part of Drs. E. S. F. Arnold, N. Bozeman, A. Flint, Jr., S. S. Purple, C. S. Wood and William Young, Fellows of the "New York Academy of Medicine," in regard to a certain charge and specifications against Dr. Fordyce Barker, President of the "Academy." New York, May 25, 1885.

"The Surgical Treatment of Cysts of the Pancreas." By N. Senn, M.D., Milwaukee, Wis. Reprint from *Journal of the American Medical Association*, September 26 and October 23, 1885.

"Avena Sativa in the Treatment of Opium Addiction a Therapeutical Fraud, a Delusion and a Snare." By J. B. Mattison, M.D., Brooklyn, N. Y. Reprint from *Medical Bulletin*, October, 1885.

"The Therapeutics of High Temperatures in Children." By William Perry Watson, A.M., M.D., Jersey City, N. J. Reprint from *Archives of Pediatrics,* September, 1885.

"Vaseline." Presented by the Chesebrough Manufacturing Company. New York, 24 State street; London (E. C.), 41 Holborn Viaduct; Paris, 13 Ave de L'Opera; Montreal, 83 St. James street.

MEDICAL NEWS.

THE SCHENECTADY FREE DISPENSARY.

Dr. Henry V. Hull, of Schenectady, writes that Dr. C. C. Duryee, George F. McDonald, W. L. Pearson, George A. Stewart and H. C. Van Zandt, associated with himself, caused a meeting of citizens to be called in Schenectady, October 29, at which it was resolved to establish a Dispensary to provide medicines and professional services for the poor. At a second public meeting, November 5, ex-Judge S. W. Jackson, from the committee on by-laws, reported that the committee had framed a code of by-laws for the consideration of the meeting.

Dr. Van Zandt offered the following:

We, T. G. Darling, H. S. DeForest, John L. Swits, S. W. Jackson, Ira Brownell and J. J. Hart, being citizens of the United States, a majority of whom are residents of the state of New York, do hereby associate ourselves together, for the benevolent and charitable purpose hereinafter designated, into a corporation under the laws of the state.

The name or title by which the said corporation shall be know in law shall be: "The Schenectady Free Dispensary."

The particular business of said corporation is the establishment and maintenance of a dispensary for the free dispensing of treatment (medical and surgical) and of medicines to the sick and injured poor of the city of Schenectady.

The number of managers of such corporation shall be twelve. The names of the manager of such corporation shall be, T. G. Darling, J. P. B. Pendleton, G. N. Caleb, Thomas Yelverton, H. S. DeForest, John L. Swits, S. W. Jackson, Ira Brownell, J. J. Hart, W. H. Munsell, B. L. Conde, W. E. Griffis.

This was adopted unanimously.

On November 12 the following physicians were elected: Consulting physicians, Drs. Mynderse, Hammer and Fuller; house physicians, Drs. Duryee, McDonald, Stewart, Van Zandt, Hull and Pearson.

The officers for the Albany Hospital for Incurables for the coming year are: Dr. William H. Murray, C. N. Phelps, Judge J. W. McNamara, the Hon. J. H. Farren and Robert Geer, trustees. The physician in charge is Dr. Hun; surgeon in charge, Dr. Morrow. Superintendent, Mrs Eleanor Spensley; assistant superintendent, Miss L. C. Considine.

PERSONALS.

—Gen. John B. Stonehouse, of Albany, acting assistant adjutant-general of the state of New York, and father of Dr. Jno. Ben. Stonehouse of our own publishing committee, died at the Ebbett House, Washington, D. C., at 1: 30 A. M., Wednesday, November 25, 1885, at the age of 72. He was stricken with paralysis about ten days before his death.

—Dr. James P. Boyd, of Albany, was in October last elected a Fellow of the British Gynæcological Society.

—W. T. H. Tipping, Ph.G. (Albany College of Pharmacy, 1885), for a long time prescription clerk at Boucher's drug store, Clinton avenue and Lark street, has opened a new drug store, under the firm name of Hendee & Tipping, at Lowville, Warren county, N. Y. The senior member of the firm is a son of Dr. Hendee, of Lowville, and is himself a practicing physician.

—Mr. George Boucher, Clinton avenue and Lark street, Albany, has engaged Mr. J. E. Mace, who has been for several years with Mingay & Co., of Saratoga, as prescription clerk, to succeed Mr. Tipping.

—Dr. Lemon Thomson, a graduate of the Albany Medical College, class of '82, and a nephew of Mr. Lemon Thomson, has gone to Rochester, where he will practice. Dr. Thomson was on the staff at Dr. Swinburne's dispensary for a long period, and then for two years visited the chief medical schools of Europe. His experience and natural ability make his success certain.—*Albany Journal*, Nov. 14.

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CORRIGENDA.—Page 1, footnote should read "*John D.* Whish;" page 8, last line, before "water" insert *one hundred parts of;* page 10, fifth line above Abstracta, sixth word should be *lengthy;* page 64, third line from foot, seventh word should be *mortar;* page 301, seventh line, read *Albadermine;* page 304, line 2, for "100" read "800;" page 305, line 1, first word should be *Extirpation;* page 334, second paragraph, first line, "influence" should be *influences;* same paragraph, fourth line, for "this" read *the.*

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